Florida Wildlife

Avon Park WMA
Blue Cypress Blues

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The Florida Magazine for all Sportsmen

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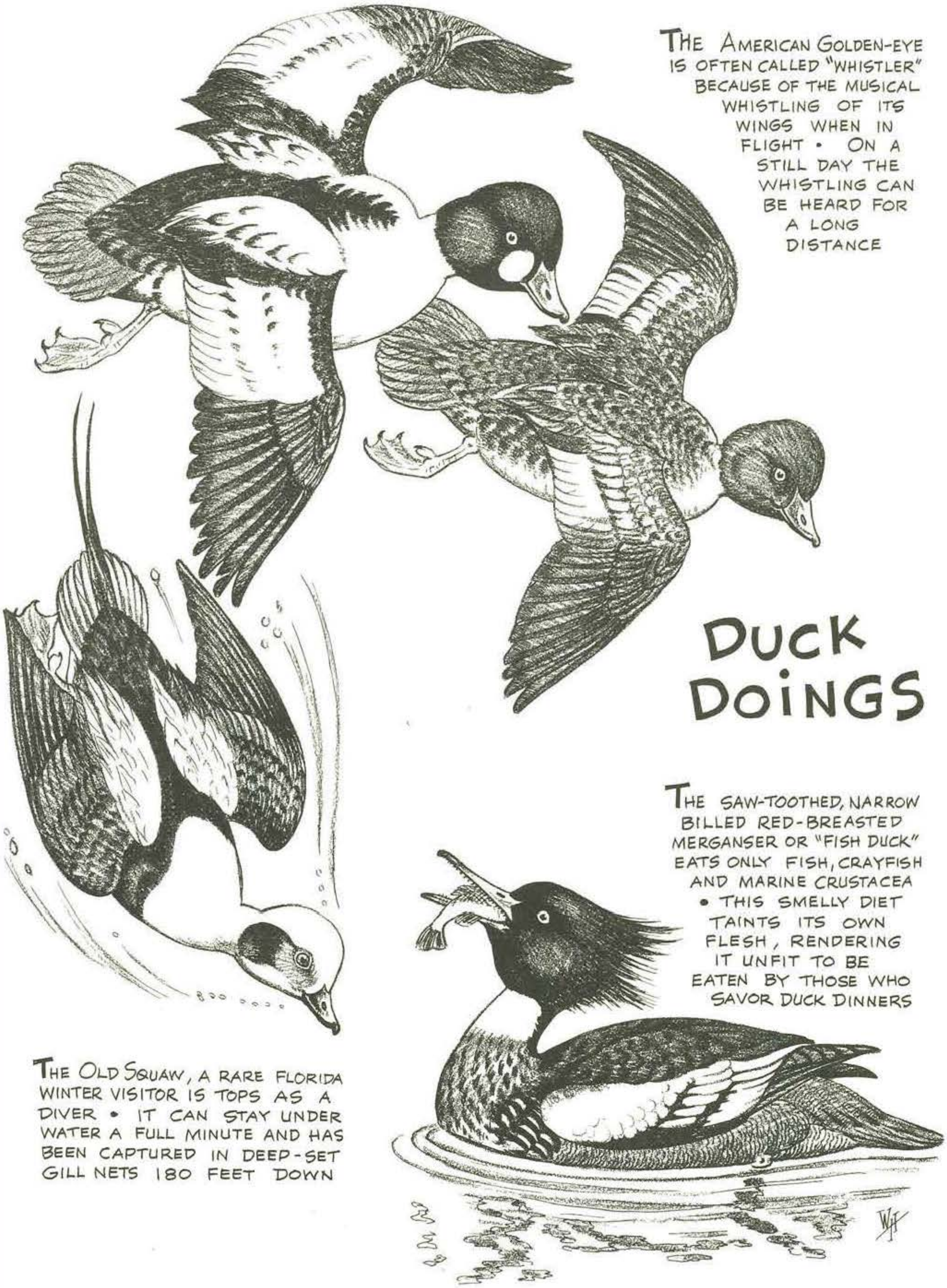

DUCK DOINGS

THE AMERICAN GOLDEN-EYE IS OFTEN CALLED "WHISTLER" BECAUSE OF THE MUSICAL WHISTLING OF ITS WINGS WHEN IN FLIGHT • ON A STILL DAY THE WHISTLING CAN BE HEARD FOR A LONG DISTANCE

THE SAW-TOOTHED, NARROW BILLED RED-BREASTED MERGANSER OR "FISH DUCK" EATS ONLY FISH, CRAYFISH AND MARINE CRUSTACEA • THIS SMELLY DIET TAINTS ITS OWN FLESH, RENDERING IT UNFIT TO BE EATEN BY THOSE WHO SAVOR DUCK DINNERS

THE OLD SQUAW, A RARE FLORIDA WINTER VISITOR IS TOPS AS A DIVER • IT CAN STAY UNDER WATER A FULL MINUTE AND HAS BEEN CAPTURED IN DEEP-SET GILL NETS 180 FEET DOWN

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The Cover

A fit associate for Halloween witches and goblins would be the fierce-appearing Great Horned Owl. For good reason this skillful, silent-winged hunter has earned the title "tiger of the air." See page 20.

Kodachrome Photo By Lynn M. Stone

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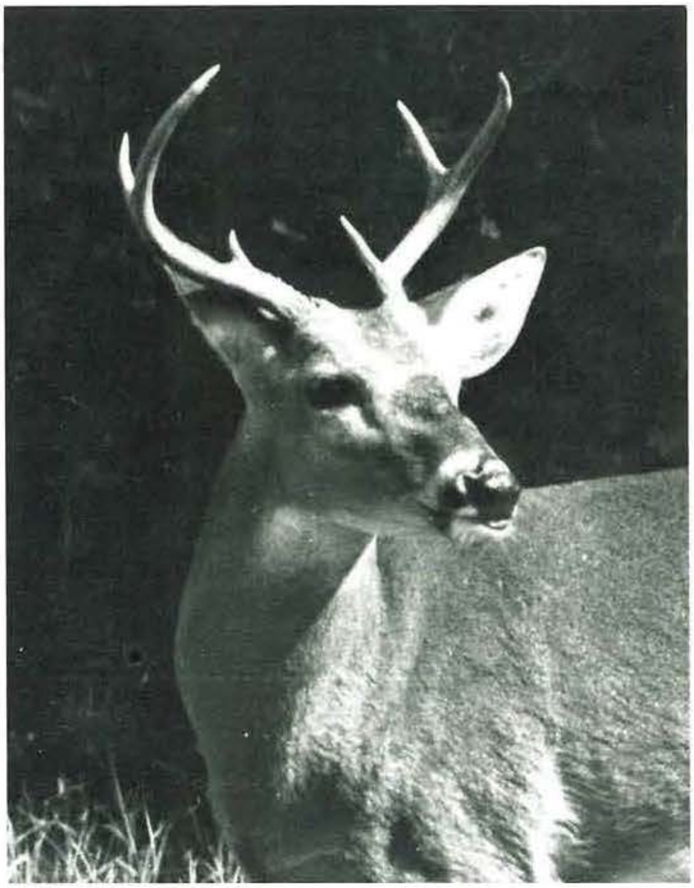


Photo By Jake Johnson

Avon Park Wildlife Management Area

Avon Park Wildlife Management Area, often referred to as "the bombing range" by Highlands and Polk County sportsmen, is laced with natural beauty, good wildlife habitat, and ample big game populations.

Managed through a cooperative agreement with the U. S. Air Force, Avon Park WMA is the site of frequent practice bombing missions on ranges scattered throughout the area, and plays a dual role as the South Florida Region's most popular public hunt area. Sprawling across 101,029 acres, the area is located on the Polk and Highlands County line, 9 miles east of Avon Park, on SR 64.

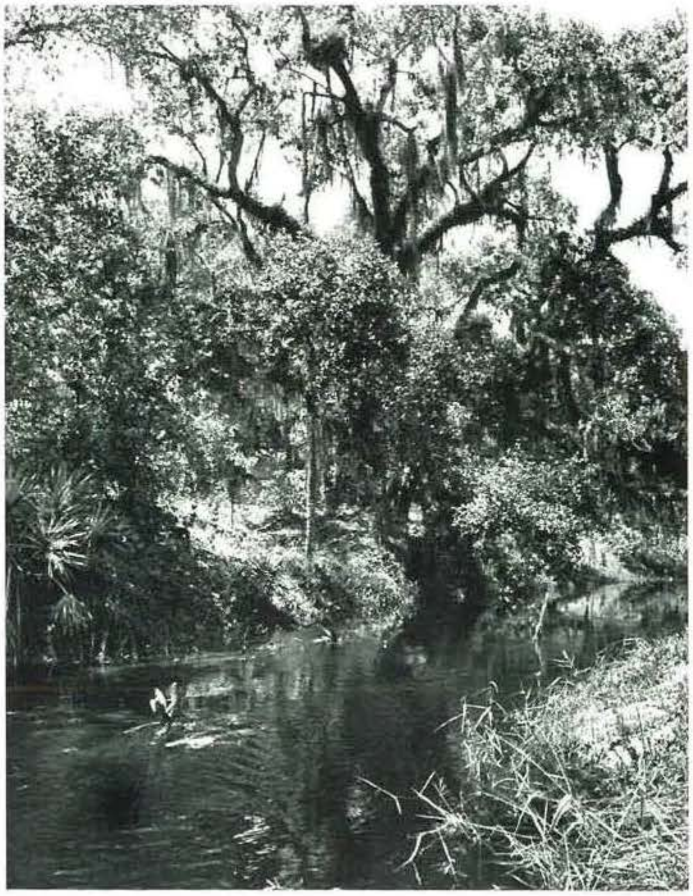
Most of the management area is typical south Florida flatwoods interspersed with cypress heads, oak hammocks, sand pine, and scrub oaks, with creeks, ponds and extensive marshland. With these various types of habitat, suitable food, water, and cover are afforded the many game and nongame species inhabiting the wildlife management area.

The land use history of Avon Park dates back to the days of early settlers who homesteaded the area. Remnants of their existence can still be seen today on the faces of tombstones located in the Fort Kissimmee Cemetery, which incidentally is posted out of the general hunting area.

In 1902, much of the area was purchased by a large cattle company for grazing of both cattle and sheep. During this era, turpentine operations and the harvesting of much of the available pine forests removed large amounts of natural vegetation. Purchasing the area in 1941 for a pilot training base, the U.S. Government set up initial efforts to manage the area for fish and wildlife. In 1951, the Game and Fresh Water Fish Commission entered into a cooperative agreement with the Air Force. This opened the door to many management and research projects.

Today, a progressive program to improve marshland habitat on Avon Park is under way to make Arbuckle Marsh, a 3,000-acre section located on the southeast boundary of the area, more inviting to resident and migratory waterfowl.

In recent years, the winter months have found the marsh dry, leaving little wetland for ducks, sandhill cranes, and other species of water birds. To reduce drainage of the much-needed water into bordering Morgan Hole and Arbuckle creeks, Wildlife Biologist David Austin and other Commission personnel have constructed a 3½-mile soil dike to retain the water during peak months of migratory waterfowl movement. Crisscrossing through the marsh, open water runways have been constructed to enhance Arbuckle Marsh and water-



The Avon Park Area's 101,000 acres is the South Florida Region's most popular public hunting ground. A good population of white-tailed deer yielded harvest of 105 deer last season. A flower-bordered main road and scene along typical hardwood hammock stream, above, show the natural beauty which is highlight of the area. Long earthern dike has been put in to improve the waterfowl habitat at Avon.

Photos By Greg Williams

This is No. 16 in a series of articles on Florida wildlife management areas. Current maps and regulations on individual areas will be available in October from Commission regional offices and the Tallahassee office (see page 1), and from each area's hunt headquarters during the fall hunting season.

By GREG WILLIAMS

fowl species to the area by offering a diversity of food, cover, and open water areas.

In addition to the Arbuckle Marsh project, oak, cypress, and tupelo gum tree planting has been initiated on many sectors of Avon Park, and supplements slash pine stands planted over past years by the Air Force. Of course, benefits from these seedlings will not be realized for many years, but the end results will benefit wildlife species and, in turn, could add to hunter success.

Success last season proved Avon Park's strength in the big game category. With an estimate of 12,833 man-days spent during the 1974-75 season on the area, a total of 105 deer, 115 wild hogs, and 47 wild turkeys were harvested. In the small game department, sportsmen bagged 1,139 quail, 250 squirrels and a top showing for the state of 692 snipe.

This season, Avon Park will host, in addition to

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the general fall season, an archery season (September 6-28 on weekends only) and a spring gobbler season (March 6-28, Saturdays and Sundays). For licensed anglers, fishing will be offered during the general hunting season on Arbuckle Lake, and in Long Cypress, Morgan Hole, and Arbuckle creeks.

When the general hunting season rolls around (November 8), hunters with permits selected by the new quota system will be gathering at the main gate on SR 64.

Under the quota system, the Commission, in agreement with the Air Force, has limited Avon Park to 2,000 permitted hunters the first two weekends of the season. All persons entering the management area must be licensed and must possess a quota hunt permit for Avon Park. Nonhunters who enter must also have their permit and will be counted in the 2,000 quota.

Avon Park is a unique wildlife management area. It is open for sportsmen during the general season on weekends only. Due to bombing missions or military necessity, the Air Force reserves the right to prohibit entrance into the area at any time. When looking at the Avon Park Wildlife Management Area map, hunters will notice several bombing range areas designated closed to all recreational activity. Sportsmen should use caution around these areas and avoid and report any military ordnance found. Regardless of how harmless they may appear, such objects must not be touched or even closely approached. They could be dangerous.

Photo By Greg Williams

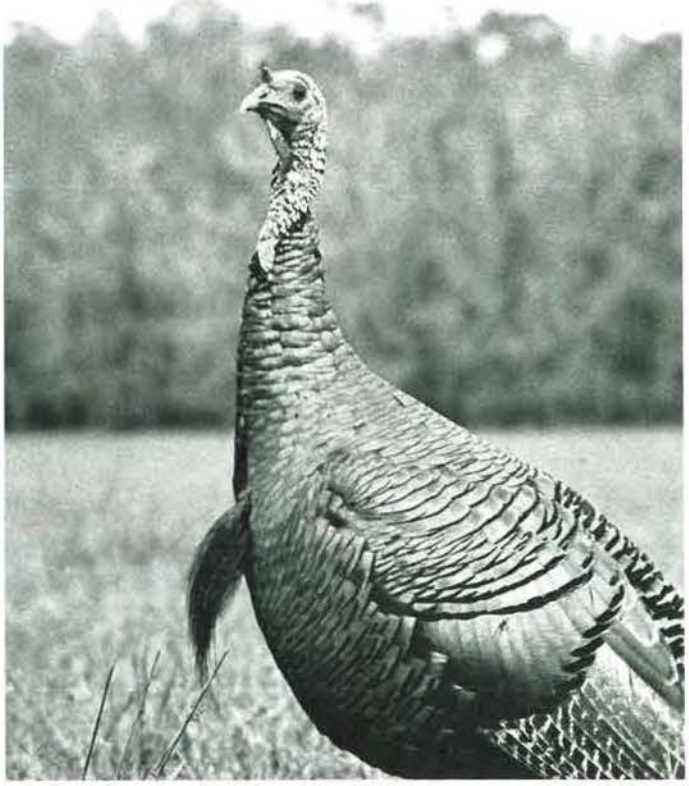
Photo By Lovett Williams

The turkey hunting prospects are good on Avon Park Area. Hunters took 47 birds during this past season. A special hunt, weekends only from March 6-28, 1976, gives hunters a chance at prized gobbler. Grave marker, below, at Fort Kissimmee cemetery is a remnant of the pioneer days here.

Rules and regulations for Avon Park differ from many other management areas. One to take note of states that all rifles, other than muzzleloaders, and all rim fire pistols are prohibited on Avon Park. For the dog hunter, dogs other than bird dogs are prohibited south of the main road, and all dogs are prohibited on areas posted as closed.

Sportsmen who travel to Avon Park for a weekend hunt will find adequate camping on the area. It is permitted only during scheduled open hunting periods, however, and campers are restricted to three designated sites, located at Morgan Hole Creek, on the Kissimmee River, and at Willingham Branch. These three campsites allow sportsmen easy access to hunting areas.

While sitting around the campsite or just taking a break from the day's hunt, hunters can take a glimpse at some of the many graceful wading birds that inhabit the marsh and creek areas. Perhaps an occasional otter or the red-cockaded woodpecker —an endangered species—may call your attention to the richness of Avon Park.

Avon Park Wildlife Management Area is colorful in nature and its history. A hunting trip to "the bombing range" will reveal to hunters, both young and old, why Avon Park is the favorite of many south Florida sportsmen. ●

It Takes All Kinds

enjoying fishing may indicate you've slipped a gear, one "expert" says—but maybe he just needs somebody to show him how to use a rod and reel

By CHARLES WATERMAN

CALLING IT "CRUELTY FOR FUN," Darwin Lambert writes in *National Parks and Conservation Magazine* that fishing for sport (and returning the fish to the water) violates ecological principles. He says it undermines our psychological health and "we might say it stimulates sadism."

This pronouncement won't cause public bonfires of fishing tackle, because few anglers will take it seriously, but I consider it a very important article for it points up something which bears on both hunting and fishing. In denouncing cruelty to fish by catching them, the writer ignores an important concept from the angle of "psychological health." That concept is that any suffering caused by the fisherman or hunter is *incidental* to the sport rather than its main objective. He has no objection to the unceremonious dumping of millions of saltwater fish into ice bins, because that cruelty is incidental to harvesting a food supply. He takes exception to discomfort caused a released fish because it is caught for fun.

The article implies that the stigma of cruelty is dispelled when the fish are eaten. It's the "fun" business that causes Mr. Lambert to say sport fishing has a "minus value." This is bad news for a commercial fisherman who happens to enjoy his work, because he really kicks his "psychological health" around.

Of course, there are naturally cruel people, but if the cruelty involved were the major objective of an angler's sport, he'd stick pins in the fish after he caught it.

We assume that the sensation of pain increases with the complexity of a living organism and that a fish is capable of much less suffering than a human being. It is unlikely that a released fish has suffered more than a miler stretching for the finish tape, or an amateur boxer losing the final round.

Cruelty is more commonly blamed on hunters than on fishermen, but the concept is the same. Those who indict hunters for cruelty seldom feel the same way about meat packers or chicken farmers. In one case, any cruelty involved is incidental to a food supply. In the other case, it is incidental to sport, with the food supply of less importance.

There are sadists, however, and there is no reason why some of them should not be hunters and fishermen. Yelling that I am a sportsman doesn't make me normal.

There is some unnecessary cruelty in fishing and hunting. I cannot stomach fishing a live frog. I do not consider it humane to beat a live minnow to death with a lot of casting. I do not like to see fish strung through the gills so that the top fish slides down on a lower one to close its mouth and gills.

As to the "cruelty" of releasing a fish to catch it again, there is no doubt that some such catches do not survive. I agree with Lambert that there may be considerable wear and tear in the process. Even if he survives several catchings—as happens under some conditions—a fish's life may be shortened by handling. For that matter, some human lives are shortened by hard work and even over-exertion in athletic contests.

When I see a fisherman giving a landed fish "artificial respiration" to make sure it swims away normally, it is hard for me to believe his psychological health is being abused very much. In most cases, he'd rather not cause the fish any discomfort at all. His great desire to fish—call it a primitive desire for the chase if you want to—simply outweighs his concern for the fish's immediate welfare.

Now Lambert does not say that releasing fish is bad for the fish population. He states no quarrel with the principles of fish management or the catch-and-release program that has been successful in so many trout waters. His concern is mainly with the effect of sport on the human being, and he feels it is a minus—that its bad outweighs its good. Fishermen and hunters feel differently.

BONEFISH EXCITE ME more than anything else I've fished for. I probably wouldn't want to spend my life fishing for nothing else, but a sighted bonefish causes me to lose most of my sanity. This fish places a premium on casting and judgement. Since it isn't much of a food fish, there's less study of bones than of bass or mackerel.

My favorite bonefishing is in the Florida Keys, where the fish are plentiful enough to be interesting, large enough to bust tackle, and smart enough to be a challenge. Although I have greatly enjoyed the fish in some of the Bahama waters where they were found in schools of hundreds, I confess I'd

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rather catch one savvy old character from the Keys than a dozen naive rooters from seldom-fished waters.

Bonefishing isn't nearly as stylish as it once was. About 25 years ago, there was a big surge in bonefish popularity. Spinning tackle had just become popular, and casting flies to bones was big news. Before that, most bonefish had been taken with bait on heavy tackle that could actually snub their early runs in some cases. Nowadays, most bonefishermen have to give line for a hundred yards or so, and the hazards of landing a bonefish of four pounds or more amid coral growth and festoons of seaweed are enough to keep me going back.

Boat traffic has made the fish spookier, and although you'll see more fish from a boat drifted or pushed across a flat, I do more wading now. Incidentally, I see more passing boats but fewer bonefishermen than 20 years ago.

Perhaps the best method is to first use a boat in strange territory and then wade where you think the fishing is good. The deeper the water, the less jumpy the fish. When he is barely covered and not actively feeding, a bone is as jumpy as a bobwhite under a hawk roost.

The modern bass boat, although hardly ever used for bonefish, works fine. Where the water is deep enough for an electric motor, I can't see that it scares them more than a pushpole, sometimes less. Main thing is to keep it running evenly. Start it or stop it and there are bad vibes.

Bonefish rules Florida flats but is neglected in some areas.

Anybody seriously taking up bonefishing should begin with a professional guide or a veteran bonefisherman, unless he has a lot of time, a lot of luck, or both. When on your own, it's better to find a good area and stick with it until you learn the local pattern of bonefish movement.

Bonefish appear on the flats when the temperature gets up to 70. In the hottest weather they tend to show only in morning and evening in most areas. A low tide at dusk is likely to produce tailers that can be stalked on foot (not too often with a boat because of the extremely skimpy water). The chief trouble with this hot weather fishing is that it lasts for such short periods you'll need some plans for the rest of the day.

Best of all, some of the best bonefishing is very close to civilization, even near Miami's pastel skyline. Almost any kind of boat will get you to some good flats if you make inquiry.

The art of chumming bones is being practiced by some of the finest Florida guides, and that's probably the most certain way of scoring—if the chummer knows his business. I have tried it on my own and turned out to be more of a polluter than a fish-catcher. I've caught bonefish in the Bahamas over a skimpy chum of conch pieces, usually put out uptide from a bonefish mud.

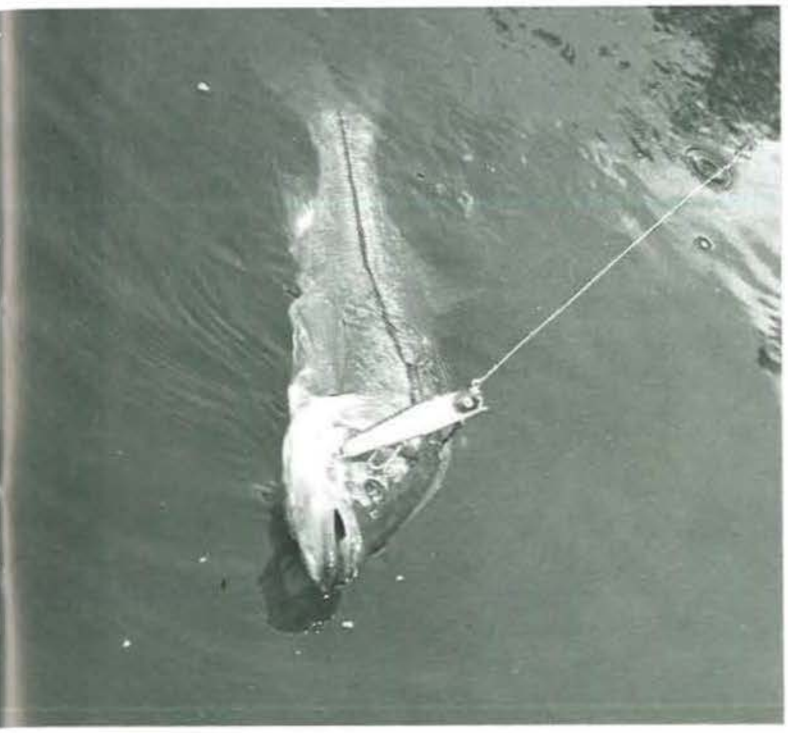
I'm not backward about peddling bonefish to all and sundry. Most fishermen put them back these days, it doesn't seem that there'll be very many bone-fishermen anyway, and the bones can take care of themselves where anglers are concerned. I hope developers don't foul up the habitat too much.

WE ALL BECOME ADDICTS of certain kinds of fishing—kinds sometimes scorned by others. I like to fish for snook by casting along mangrove shores, which is not necessarily more artistic than other forms but happens to turn me on.

Early in the summer, I was living in a little camper on the shore of a tidal river on the mangrove coast. The shoreline fishing had been indifferent, but we were finding a few fish and grumbling about how tough it was.

Then one night a squadron of big snook moved into the river right by the camper and started blasting bait. Sounded like a pistol battle, the big pops peculiar to snook strikes intermingled with the frantic showers of baitfish.

So I got a casting rod, stumbled through the darkness to a good position, and flung a plug out into the danger zone. I lost a couple of fish and then hooked and landed a good one. But he had no place to go except the open river, so the fight wasn't too spectacular, even though he lunged



Florida snook is good any time—he does best along shorelines.

noisily out there in the darkness. The mosquitos were bad anyway. I went in and left them still striking. On that particular trip, I just wasn't programmed for night fishing in open water.

A LADY WE WENT bonefishing with the other day wanted to know if it was really necessary to wear those long pants while wading the flats. Said she couldn't stand wet clothing and wanted to know if she'd really get scratched up if she wore shorts.

I admitted one reason for my wearing long pants was to protect my pale shanks from the sun but told her the coral and certain other flora and fauna was scratchy and bitey. She said to heck with the scratches. That was better than wet pants.

I don't have that much aversion to wet pants, although they don't add to my comfort. One solution, of course, is to change as soon as you come out of the water. Another is to wear very lightweight clothing, some of which will dry in minutes in a Florida sun, even faster if you're traveling in an open boat from site to site. Waders are simply too hot in most of Florida from May through September.

REFINISHING GLASS RODS apparently has little to do with their length of service. The original procedures followed by manufacturers sometimes involve considerable skill and possibly solutions not available to the casual re-doer.

Rods I've acquired in recent years appear to carry their finish pretty well. Strangely, even after several years of use, a finish can simply start scaling off and give the stick a scabrous look and feel. I've had a couple of rods refinished beautifully by experts. The most beautiful job ever done for me remained intact for about two years of use. Then it flaked off.

Gudebrod is now marketing a 2-solution finish called Hard 'n Fast that gives the rod a glossy finish. You put it on with a brush. It's hard for a beginner to avoid a little running, but the finished product is shiny enough for anyone. It took considerably longer to dry than the literature indicates but seems to be hard and fast so far, as the manufacturer promises. The rod has had some use, but not enough to tell how permanent the gloss will be. Looks good.

SPLITTING INSTEAD OF STICKING is the chief danger of glass ferrules. As a whole, I've had pretty good luck with them, and I've been whaling away with them ever since they appeared on the market. However, once a glass ferrule begins to slip from where it's bonded to the stick, it's probably due for trouble. A heavy-duty saltwater flyrod I've used for 4 years gave up the ghost the other day, and I guess I'll have to send it back to the maker, because not everybody is ready to install glass ferrules. First the female section slipped just a little under the thread wrapping. Then it split into uselessness.

THE CURSE OF OTHERWISE EFFICIENT fishing boats is likely to be the electrical system that serves running lights, tach or speedometer, motor tilts, radio, fathometer, electric motor, fuel gauges, and such. In most cases, these items are added one at a time after the boat is purchased, often being put on by different mechanics, some of whom may have distinctly individual ideas about electricity. The result is likely to be a frightening maze of wires.

Since I have never even reached the point Ben Franklin attained when he flew his kite into the thunderstorm, I approach such nests with apprehension, preferring to head for the nearest man who understands such things.

I was watching a boat expert surveying such wiring spaghetti the other day. He lay motionless and stared at the mess, which had been put out of commission when the boat had flooded.

"It looks like the inside of an old-fashioned television set," he said. "I'm going to have to start from scratch, I guess. The hell of it is that I installed it myself a while back."

There are a couple of solutions for those who don't know which wire does what to what. One is to have as much as possible of the gadgetry installed by the same expert. The other is to have some sort of rough diagram of the project.

I'm so gunshy of wiring that I immediately wring my hands when something quits, and then hurry for help. I drove 5 miles with my trailered boat the other day to learn a bulb had burned out. ●

TWO ENDANGERED BIRDS

THE MYSTERY BEHIND THE BEHAVIOR of the red-cockaded woodpecker (*Dendrocopos borealis*) endangered species, may be unraveled by a team of scientists who have been asked to develop a plan to save the bird from extinction. The team's establishment was announced in June by Keith M. Schreiner, associate director of Interior's U. S. Fish and Wildlife Service.

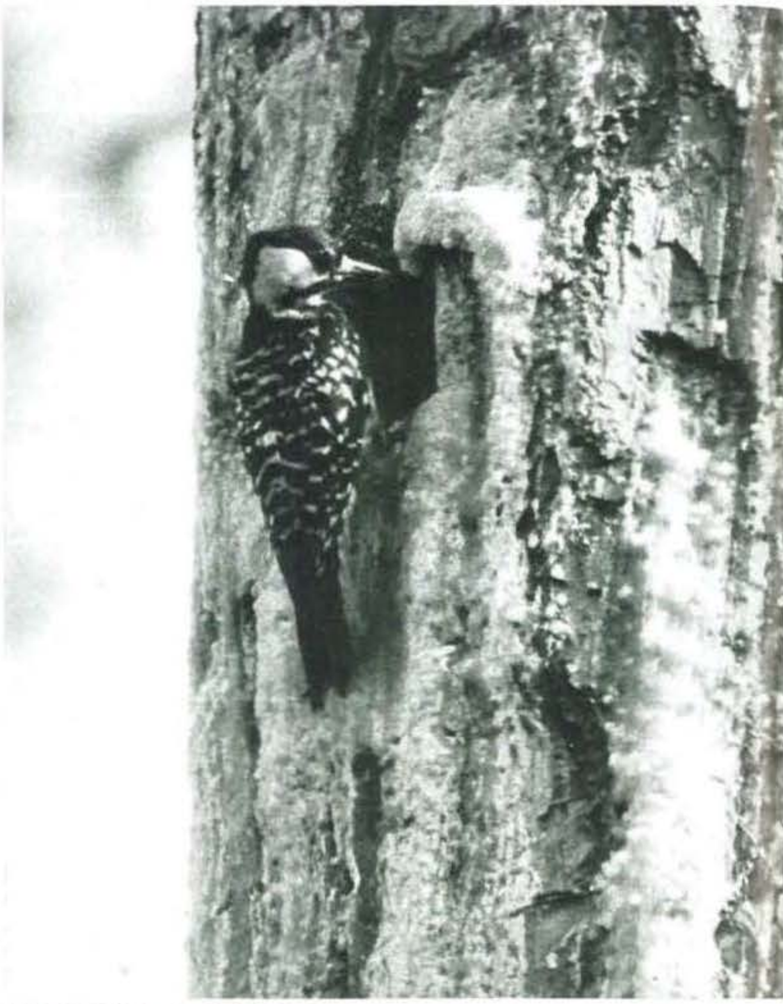
The recovery team will be headed by Jerome A. Jackson of Mississippi State University, and will include Wilson W. Baker of Tall Timbers Research Institute, Tallahassee; Verlon Carter of the U. S. Fish and Wildlife Service; Thad Cherry of Weyerhauser Corporation; and Melvin L. Hopkins of the U. S. Forest Service. The team will also use consultants to develop and help implement a comprehensive plan to restore this bird to a healthy state and protect potential nesting habitat. The consultants are Ted Beckett of Magnolia Gardens, Daniel W. Lay of the Texas Parks and Wildlife Department, Teddy E. Lynn, Jr., of International Paper Company, and Richard L. Thompson of the U. S. Fish and Wildlife Service.

Although still inhabiting its original range in the Southeastern United States, the populations have declined in recent years due to forestry practices which have affected the park-like pine woods where the bird lives.

Modern forestry practices tend to eliminate the aging pine trees the bird requires for its nests and roosts. Unlike other woodpeckers, it makes its home only in mature, living pine trees infected with "red heart," a fungus disease which rots trees from the inside out. This condition seldom strikes trees less than 80 years old, and in today's managed forests few trees are permitted to become old enough to contract the disease.

How the woodpecker recognizes the diseased trees which appear healthy from the outside, is only one of the unsolved mysteries in the life of this bird. Once the right tree has been located, the bird pecks through the living outer wood and hollows out a snug cavity in the softer heart of the tree. Both the male and female peck 12-inch deep cavities in separate trees. Nesting takes place in the cavity carved out by the male.

After the cavity is hollowed out, the birds undertake an even more unusual project—the drilling of many small holes into the sapwood surrounding the cavity. From these holes a continuous flow of sticky pitch oozes, eventually coating the trunk of the tree with a white sheen visible some distance away. The exact purpose of this sticky coating is still unknown, but it may help discourage ants, flying squirrels, or snakes from invading the nest. Or, it may help the bird locate its home tree.


RED-COCKADED WOODPECKER Photo By Wallace Hughes

Another unique feature of the bird's habits is its social nature. This small woodpecker tends to nest in colonies, and young birds living in adjacent trees sometime help pairs raise their young. These helpers may include the pair's own young from the previous year.

The red-cockaded woodpecker also plays an interesting role in the pine woods. These areas are frequently subject to wild fires which rapidly consume the dead trees in which other species of woodpeckers usually hollow out their nests. The living, pitch-coated homes of the red-cockaded woodpecker nests are much in demand: red-bellied, red-headed, and pileated woodpeckers, titmice, bluebirds, and wood ducks, squirrels, and even honey bees may take them over, finding in a living tree a safe home which they cannot construct themselves.

Although the U. S. Forest Service, state, and private groups have for some time been preserving particular trees, the recovery team will further develop and coordinate new and existing efforts to save this bird.

The red-cockaded woodpecker may multiply itself off the endangered species list before long in certain areas of the South, says the Wildlife Management Institute, Washington, D.C. Intensive management by the U. S. Forest Service has caused a dramatic population increase of the diminutive woodpecker on the Francis Marion National Forest in South Carolina. Other national and private forests have growing or stable populations.

The Forest Service initiated a new wildlife management program in the Southern Region several years ago. Management objectives for wildlife and timber were set according to what the land could produce best. The program, in essence, calls for maximum timber production within the constraints of providing optimum wildlife diversity and abundance. It seems to be working well.

The red-cockaded woodpecker was rare on the Francis Marion a decade ago. Today, under the new management program, there are about 2000. One hundred and eleven of 119 management units on the forest now have known red-cockaded colonies. The forest totals about 250,000 acres. The Forest Service has set a goal of four red-cockaded colonies per 1000 acres. Each colony may consist of from 2 to 10 birds.

Along with red-cockaded woodpeckers and numerous other wildlife, the Francis Marion produces a sustained yield of about 60 million board feet of timber per year. It is living proof that wildlife and timber production are compatible when land is managed for both.

THE EVERGLADE KITE's chances for survival in Florida have been enhanced by the establishment of a cooperative Federal-State team of experts who will give priority to restoring this hawk to its former healthy state.

Heading up the Everglade kite recovery team is Wildlife Research Biologist Lovett E. Williams, Jr., of the Florida Game and Fresh Water Fish Commission. Other team members are Alexander Sprunt IV, research director of the National Audubon Society, and Paul Sykes of the U. S. Fish and Wildlife Service.

The team's primary objective is to coordinate actions to restore the everglade kite to as much of its former range as possible, after drawing up a detailed plan which will schedule specific actions needed.

The everglade kite (*Rostrhamus sociabilis plumbeus*) is a predatory bird similar to a marsh hawk and related to the falcon. It is one of several kinds of snail kites that occur in Central and South America. At one time the everglade or snail kite was distributed throughout peninsular Florida in freshwater marshes. At present it is restricted primarily to southeastern Florida and is thought to number less than 100 individuals.

The original population was severely reduced because of destruction of habitat and shooting. Drainage of marshes for agricultural and residential use continues to be a major factor in the decline of this bird. This problem, plus drought and fire, have reduced populations of the large apple snail (*Pomacea paludosa*) on which the kite depends for food. The major threat to the remaining kite population involves maintenance of proper water levels in its habitat for snail production and maintenance of nesting cover. In recent years the flow of water from Lake Okeechobee to the Everglades has been reduced by drought and diversion to agricultural areas.

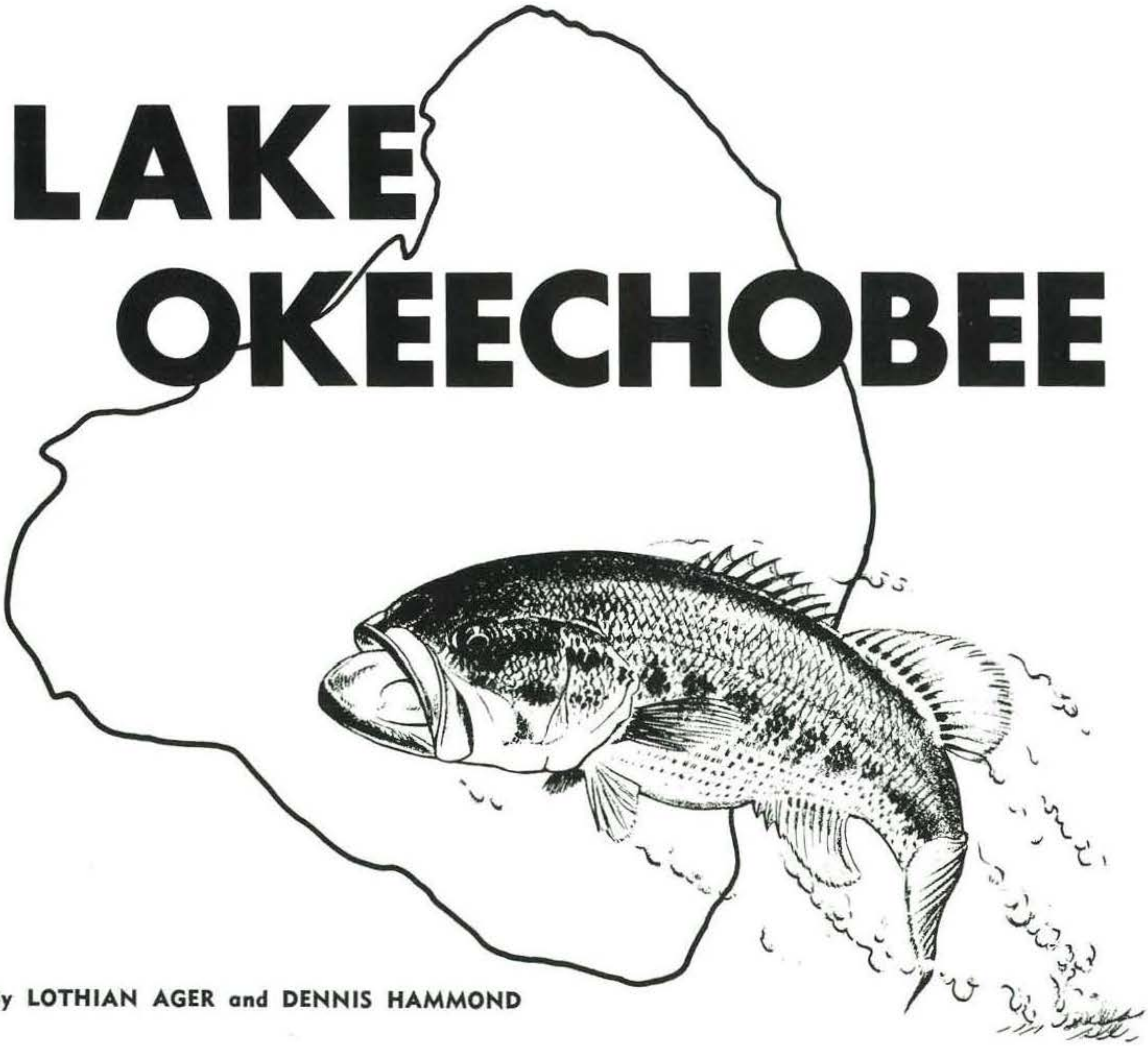
Some constructive steps have been taken to assist the kite. Educational programs by the Florida Game and Fresh Water Fish Commission, the U. S. Fish and Wildlife Service, and the National Audubon Society are intended to discourage indiscriminate shooting and publicize the plight of the kite. Numerous signs depicting this bird dot the marshes of southern Florida. Sanctuaries and known nesting areas are regularly patrolled. Portions of the Loxahatchee National Wildlife Refuge where kites nest are closed to entry during nesting seasons.

Research also is under way in the field and at the Fish and Wildlife Service's Patuxent Wildlife Research Center in Maryland, to ascertain the status of the kite, to determine conservation methods, and to develop techniques for increasing production of apple snails. South American snail kites, one of four subspecies of everglade kite, are being reared at Patuxent to develop information on snail kite habitat requirements. ●

Immature EVERGLADES KITE

Photo By U.S. Fish & Wildlife Service

LAKE OKEECHOBEE



By **LOTHIAN AGER and DENNIS HAMMOND**

WHEN THE SUBJECT IS WATER AND FISH, it's difficult to talk about either without talking about Lake Okeechobee. With more than 450,000 surface acres, there is more water in Lake Okeechobee than land in Pinellas County. Viewed from any angle, that's a mighty big body of water.

With this much water there just has to be lots of fish, and there are. Studies conducted by the Game and Fresh Water Fish Commission indicate the lake contains about 100 to 150 pounds of fish per acre, or about 45 million pounds of fish. Unfortunately, they're not all good, healthy, catchable-sized bass, crappie or bream. More than 75 percent of the total fish in Lake Okeechobee are rough fish such as gizzard shad and garfish, or nongame fish such as catfish.

The real sad part is that, of the remaining 9 to 10 million pounds of game fish, the majority are not bragging size bass or frying size bream. Biologists who have monitored Lake Okeechobee over the years have documented a significant reduction in the average size of the black crappie since 1950. The average 3-year-old crappie caught last year was 3 to 4 inches smaller than the average caught in previous years.

There are probably more fish in Lake Okeechobee than at any time in history, and each year this population increases. While there are more fish, they are also much smaller, and anglers can recognize this as a solid indication of a fish population that is out of balance.

There are several factors that contribute to unbalanced fish populations. One of the most common is the failure to harvest an adequate number of fish. Fishery biologists indicate that in order to maintain a good balance, which, in turn, will provide room for growth and reproduction, at least one-half of the available fish should be harvested each year.

A check of Lake Okeechobee anglers indicates that the average catch is slightly less than 2 pounds of fish per fisherman. With about 150,000 annual trips, this averages somewhat less than 500,000 pounds of game fish harvested annually. To harvest one-half of the available game fish, fishermen would have to catch almost 5 million pounds.

While Lake Okeechobee has always been considered a jewel in Florida's vast fresh water sportfishing crown, it is also the backbone of the state's commercial fresh water fishing industry. Each year, commercial fishermen catch an estimated 2 million pounds of catfish, or about one-third of the available harvest.

As Lake Okeechobee contains an estimated 45 million pounds of fish, and as good management of the fishery resource requires a harvest of at least one-half of the available population, and as sport fishermen catch less than 500,000 pounds of game fish and commercial fishermen harvest an estimated 2 million pounds of non-game fish, and as the remaining 42 million plus pounds of fish have a normal spawning season, it is easy to visualize a situation that would create an unbalanced fish population.

If the basic problem is caused by an excessive population of fish, it would appear as though the basic solution would be to simply reduce the excess. It sounds simple, but the hard facts should be recognized. Sport fishermen and the commercial catfish industry have not been able to control the exploding fish population over the past 20 years, and each year the problem magnifies.

A closer look indicates that about 28 of the estimated 45 million pounds of fish in Lake Okeechobee are rough fish such as gizzard shad, garfish, and mudfish, and thus are not touched by the sport fisherman or the commercial industry.

A PROPOSAL FOR FISH MANAGEMENT AND UTILIZATION

ITS FISH
ITS FISHING
ITS FUTURE

An even closer look finds an estimated 37 million pounds of the fish in the open waters, and these fish probably never have the chance to nibble a worm or strike a lure. While commercial trotline fishing is conducted in open water, the sport angler seldom ventures far from the vegetated shorelines of the lake. The rough fish and game fish found in the open waters continue to multiply and add to the population explosion with each generation.

Under normal conditions, warmwater fish such as bass and bream grow rapidly. The situation in Lake Okeechobee is not normal. It can best be described by using an example such as a well-fertilized lawn. A lawn that has been fertilized will grow much faster and heavier than a lawn without fertilizer, and it requires frequent mowing to prevent excessive growth which would damage the lawn and allow takeover by weeds.

Lake Okeechobee is an extremely fertile lake. The plants and fish grow in lush proportions. While a certain amount of fertilizer is necessary to assure good growth, too much will cause excessive growth, and Lake Okeechobee has too much.

The big lake has often been described as an enormous catch basin in that it receives too many nutrients (fertilizer) as the result of back-pumped drainage from agricultural areas as well as drainage from the Taylor Creek, Nubbin Slough, and Kissimmee River watersheds. This increased nutrient supply has upset the normal biological reaction of the food chains and production of more and more undesirable fish. On one hand the increased nutrient supply has resulted in an increased production of fish. On the other hand this increased production has not been accompanied by an increased harvest of fish, and the problem is compounded.

While studies seeking possible solutions to the problem of nutrients entering Lake Okeechobee continue, the price and process of correcting some of man's past mistakes can be both costly and time-consuming. Meanwhile, the lake continues to receive a daily dose of unnecessary and unneeded nutrient pollution which adds to the already existing problem.

It must be assumed that a solution to the nutrient pollution problem may be some years away, and while it will be difficult and costly to reverse the process, at least a partial solution to the dilemma may be found by removing some of the nutrients that are presently tied up in Lake Okeechobee. While removal of a limited supply of nutrients would not restore Lake Okeechobee, it would surely help slow the process of deterioration.

Much of the nutrient supply in a body of water may be absorbed by plants and fish; however, when the fish die—and fish don't live very long—they sink to the bottom, decompose, and add to the already excessive nutrient pollution. Removal of one-half

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of the fish in Lake Okeechobee would achieve three objectives: (1) It would relieve a crowded condition, providing room for growth and reproduction of game fish, which would help restore a balanced fish population. (2) Removal of fish would also remove some of the nutrient pollution. Removal of one-half of the total poundage would remove an estimated 9 percent of the phosphorus and 18 percent of the nitrogen which are trace elements of the nutrient pollution annually trapped in the lake. (3) It would provide a practical utilization of a renewable natural resource that is presently being wasted.

Removing one-half of the fish in Lake Okeechobee would not be a simple nor short-term process. It is easy to see that present fishing methods will not control the exploding fish population. There is but one practical alternative. More efficient fishing methods must be employed.

The use of nets for the harvesting of fish has long been an acceptable practice in salt water and a proven tool for management of fresh water fish when applied under supervision. The use of nets in the open water portions of Lake Okeechobee would provide an accelerated harvest of the fish population. The use of nets in designated areas and under supervision would not interfere with regular sport fishing activity. The use of nets in designated areas and under close supervision and control would be one possible solution for helping solve the dilemma of Lake Okeechobee.

The Game and Fresh Water Fish Commission's proposal for a program of Fishery Utilization and Management for Lake Okeechobee is dependent upon removal of large numbers of fish, both rough and selected game species. There is no biological reason to prohibit any type of fishing device except those which might selectively harvest bass; therefore, all types of commercial fishery devices should be considered. Limiting factors for use of nets or other fish harvest methods are (1) public acceptance and (2) minimization of conflict with sport fishing.

Fishing Methods

While the manner and method of fish removal under consideration had not been finalized at press time, the following points were being considered:

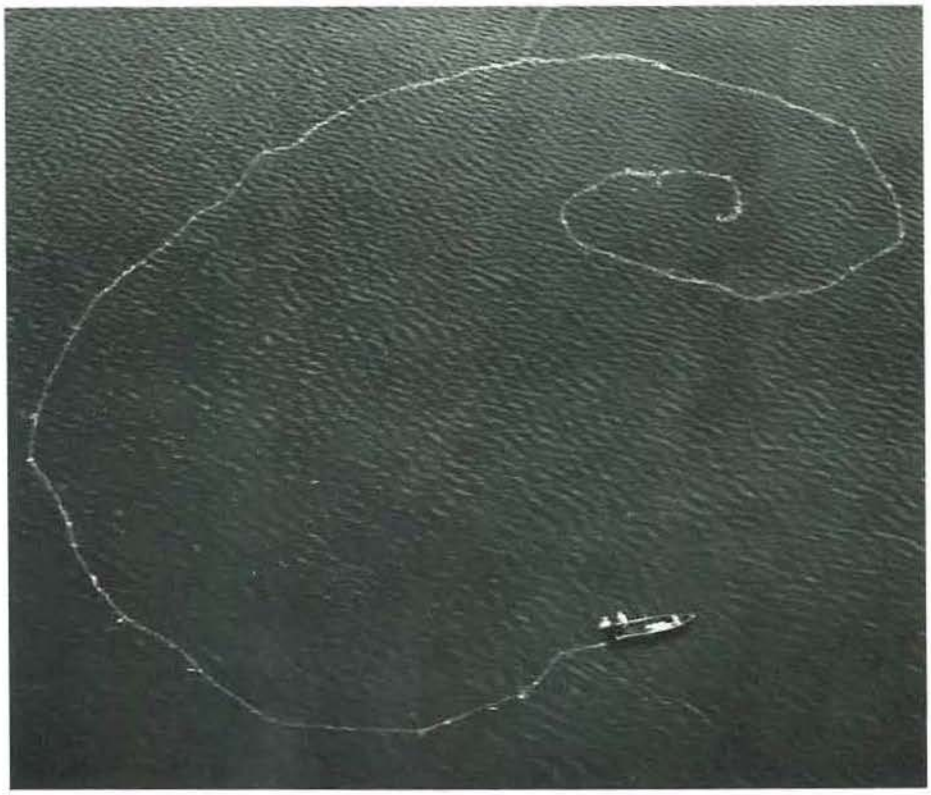
1. Permitting the removal and commercialization of all species of fish except black bass and chain pickerel.

2. Utilization of haul seines up to 1,600 yards in length. Use of haul seines would be restricted to the open waters of the lake; they would not be allowed within 1 mile of any emergent vegetation. Haul seine permits would be issued by the Commission, and such permits would be revoked upon conviction of any fish law violation.

3. Utilization of fish trawls. This method of fishing would enable individuals not financially able to purchase haul seines to participate in the fishery utilization and management program. Use of fish trawls would be restricted to the open waters and be allowed only by special permit issued by the Commission.

4. Double-funnel wire traps. This method is most effective for harvest of panfish, particularly black crappie. However, it also conflicts the most with sport fishing, because traps are often fished in the

Photo By Jim Reed



Under the Okeechobee plan, haul seines, such as one at left, up to 1600 yards in length, would be allowed to operate upon open water areas only. Desirable fish, such as speckled perch (black crappie) in photo, upper right, average smaller in size than they did twenty years ago. This overcrowding has resulted in stunting of fish through restriction of food supply. A catch of gizzard shad and catfish is shown in photo at right. Management plan calls for removing the rough fish and reducing the population of game and food species.

Photo By Wallace Hughes

grass areas utilized by sport fishermen. Due to this conflict, it is not being recommended that wire traps be permitted initially.

5. Utilization of trotlines. This method is most productive for the harvesting of catfish; it is not an effective harvest method for rough or game fish. Trotline fishing should be continued but is of little value for the removal of fish other than catfish.

6. Hook and line fishing. Sport fishermen who wish to purchase a $5 commercial fishing license in addition to their regular fishing license could be allowed to take an unlimited amount of bream and speckled perch for commercial purposes. All fish in excess of their daily bag limit would be subject to the same regulations for disposal as other fish caught by commercial devices.

Fish Utilization

Without proper use of the fish removed from the lake, much of the benefit of the program would be lost. A vital part of the overall proposal would be establishment of a procedure to allow marketing of the speckled perch and bream. These fish would be marketed in much the same manner as fresh water catfish. Stringent regulations would be applied to insure that marketed fish originated in Lake Okeechobee. Rough fish would be disposed of either as crab bait, fertilizer, or possibly for the pet food industry. It might become necessary to initiate a buy-back program for the disposition of rough fish such as gizzard shad until such time as a market is developed for these fish.

The proposal provides that all fish caught commercially, including all rough fish, would have to be unloaded at designated sites. The unloading sites would be operated by bonded wholesale fish dealers. Game fish would be individually tagged with a tag similar to those now used by the poultry industry. The Commission would issue tags to the wholesale fish dealers, who would be held strictly accountable for tag use. A fish, after being tagged, could then be transported to retail markets or restaurants and sold as any other commercial fish.

The tagging process would insure that only Okeechobee fish would be marketed. The wholesale dealers would be bonded in the amount of $10,000, and it would be highly unlikely that they would risk losing this performance bond for the benefit of a few fish which might be brought to them from other waters.

Enforcement Of Regulations

The enforcement of rules and regulations for control of the Lake Okeechobee Fishery Utilization and Management Proposal would not be difficult nor require much additional manpower. Some of the suggested rules and possible penalties are:

1. Regular daily and possession limits for game fish would apply to all sport fishermen with the exception that fishermen possessing a regular fishing license plus a $5 commercial fishing license could exceed the daily bag limit for game fish other than black bass and pickerel. Fish in excess of the daily bag would have to be processed through a licensed and bonded wholesale fish dealer.

2. Use of nets for the taking of game fish would

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Photo By Jim Reed

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be limited to daylight hours. Use of such devices after dark would be in violation of the special regulations, and the fisherman doing so would face arrest as well as loss of equipment.

3. Possession or sale of untagged game fish by a market or restaurant would be in violation of the special regulation.

4. Commercial fishing devices such as seines or trawls would be limited to specified areas of open water, and use of such devices within the closed areas would be in violation, with the fisherman risking both arrest and loss of his special permit and fishing equipment.

5. Possession of commercial fishing devices and black bass or chain pickerel would be a violation of the special regulation.

6. Bonded wholesale fish dealers would be held strictly accountable for fish tags, and the inability to provide a proper accounting would result in arrest and forfeiture of $10,000 performance bond.

A careful review of the proposals by wildlife law enforcement personnel familiar with Lake Okeechobee has indicated there should be a need for a minimum increase of enforcement personnel.

Conclusion

It's difficult to explain that a lake as large as Lake Okeechobee is in trouble and at the same time say there is an overabundance of fish. The two don't seem to be compatible. The average fisherman will believe a body of water is in good condition if millions of fish are being produced. Unfortunately, the direct opposite is quite often the situation. Too many fish can cause problems, and, generally, too many fish serve as a solid indication of other problems.

Lake Okeechobee contains approximately 450,000 surface acres of water. Sports fishermen generally fish only about 75,900 acres that include the shallow weedy areas around the lake edges. The remaining 374,133 acres hold more than 37 million pounds of harvestable fish which are not presently utilized. Lake Okeechobee has around 100 to 150 pounds of fish per acre, while the annual harvest is only 5 to 6 pounds per acre. Most of the fish in the lake live less than 5 years, and most of them die of old age and add to the nutrient pollution of the Okeechobee waters.

There are so many unharvested fish in the lake that competition for space and food is limiting the size of the game fish species, and this population explosion continues each year. As stated at the beginning, biologists have documented a significant reduction in the average size of the black crappie since 1950. There are an estimated 9 to 10 million individual black crappie in the lake, and less than 1 million are being harvested.

Of the 45 million pounds of fish in Lake Okeechobee, an estimated 75 percent are rough fish such as gizzard shad and garfish and nongame fish such as catfish.

The Game and Fresh Water Fish Commission has proposed a fish utilization and management program that is based on sound biological recommendations. The program proposes controlled and supervised commercial harvest of rough fish, nongame fish, and specified game fish. In order to properly utilize and manage the renewable natural fishery resource, it is recommended that up to one-half of the total fish population be removed from Lake Okeechobee to provide room for growth, stimulate game fish reproduction, and aid in removing some of the nutrients from the waters.

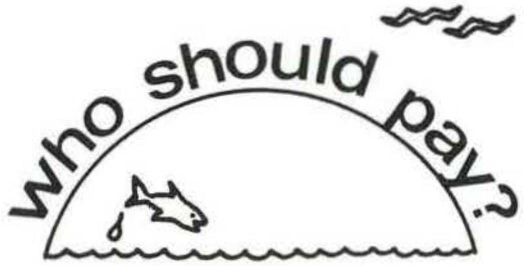
The Commission is charged under law to serve as guardian and protector of the fresh water fish and wildlife of Florida. The Commission is not charged with the authority to preserve water or the quality of the fresh waters of the state, and it is with this limited authority that the Commission recommends a procedure by which some improvement may be gained. The proposal is made with the full knowledge that adoption of a utilization and management program will not cure the declining condition existing on Lake Okeechobee.

Fisheries biologists can recommend a management program, and the Commission can adopt rules and regulations for such a proposal, but only the people of this state can endorse and support a movement that may be the first step in helping save the jewel of Florida's fresh water fishing crown—Lake Okeechobee.

The future of Lake Okeechobee is up to you. ●

Florida Department of Commerce Photo

Although it may be difficult to accept the fact that 450,000-acre Lake Okeechobee has too many fish for its own good, such is actually the case. The Commission's plan is major step in saving Florida's huge, far-famed fishing water from disaster.



who should pay?

WHO SHOULD PAY for wildlife habitat? Just the hunters and fishermen? Or should birdwatchers, photographers and other nonhunting outdoorsmen share the cost?

And how should wildlife money be spent? Mainly on game species that interest the sportsmen? Or should our fish and wildlife agencies pay more attention to animals that have only esthetic and ecological value?

These questions have racked and divided the conservation movement since the early 1900's. With two landmark laws, the Federal Aid in Wildlife Restoration (Pittman-Robertson) Act of 1937 and the Federal Aid in Fisheries Restoration (Dingell-Johnson) Act of 1950, Congress put most of the financial burden on hunters and fishermen, requiring them to support state and federal wildlife programs through taxes on their firearms, ammunition and fishing gear.

With revenues from these taxes the federal government has provided $600 million in matching grants to state fish and wildlife agencies over the years, and the states have spent more than $100 million of this money acquiring 3.5 million acres of land and water for wildlife habitat. In addition, an estimated 42 million Americans shell out about $240 million a year for state hunting and fishing licenses. Most of the money is spent on programs designed for the people who provide it—the hunters and anglers.

But now, the National Wildlife Federation reports, two federal agencies are taking a new look at this system of taxes and expenditures. The Council on Environmental Quality, which makes policy recommendations to the President, and the U.S. Fish and Wildlife Service, which administers wildlife policy for the Interior Department, are studying a proposal to tax nonhunting and nonfishing users of public wildlife lands and to spend more money protecting nongame wildlife species—animals that are not hunted or caught.

The proposal is contained in a report prepared for the two agencies by the Wildlife Management Institute, a private, nonprofit conservation organization. Although it has just been made public, the WMI study has triggered a lively discussion among conservation leaders who have seen it.

The report points out that there has been a marked trend in recent years toward greater use of state and federal recreational lands by birdwatchers, photographers, skiiers, campers, and other "nonconsumptive users." More than 12 million participate in just wildlife observation and photography, according to the Interior Department.

A key recommendation of the WMI report calls for the funding of nongame fish and wildlife habitat programs with federal manufacturer's excise taxes on recreational vehicles, tents, sleeping bags, lanterns, snow skis, wild bird seed, scuba diving equipment, binoculars, and cameras, film, and other photographic equipment.

Excise taxes of from one to 10 per cent on these goods could yield as much as $149.6 million annually and easily fund a recommended $40 million federal matching grant-in-aid nongame wildlife habitat program with the states, according to the report.

Other suggested excise tax sources include strip mining royalty fees, zoo admissions, nonreturnable bottles, building permits, recreational stamps in the absence of hunting or fishing licenses, a surcharge on timber sales on public lands, and a $1.00 check-off on federal and state income taxes.

In explaining this new funding approach, the WMI report notes "state fish and wildlife agencies are conducting nongame programs almost entirely with funds obtained from hunters and fishermen. While the Institute believes that it is appropriate to use some funds from these sources for nongame work, the states' ever-present need for greater funding for traditional programs must be acknowledged and respected. Further, all members of society, not solely hunters and anglers, are the beneficiaries of nongame programs. Hence, a broader cross section of society must share in the costs."

The report also recommends that administrative responsibility for the expanded wildlife program be assigned to the U.S. Fish and Wildlife Service, and that Congress appropriate $5 million to enable the agency, which is part of the U.S. Department of the Interior, to initiate the program.

Other recommendations are included in the report, which is entitled *Current Investments, Projected Needs and Potential New Sources of Income for Nongame Fish and Wildlife Programs in the United States.*

"The Institute considers its report and recommendations as a point of beginning," said Daniel A. Poole, Institute President. "Programs for nongame species would continue to sputter along in the absence of such an initial baseline study. The report charts a route that can be followed to build toward an adequate national effort to manage nongame fish and wildlife."

Copies of the report are available from the Wildlife Management Institute, 709 Wire Building, 1000 Vermont Avenue, N.W., Washington, D.C. 20005 for $1.00 each postpaid. Bulk orders of 10 or more are 70c each plus postage. ●

the "hair of the dog" is the only cure when you've got those . . . .

Blue Cypress Blues

WE GOT THE BLUES, the Blue Cypress blues, and the only way to cure 'em is to fish Blue Cypress again and again.

Sound odd? It was strange. The largemouth black bass in this beautiful Florida lake drove us crazy with their antics, almost making us candidates for a head shrinker's couch. Yet they cooperated just enough to guarantee we'll be coming back again and again. While displaying their wares with extreme care, those Blue Cypress bucketmouths really conned us.

Never have we had bass eyeball lures so consistently. They charged with torpedo wakes. They rolled at our plugs. It didn't matter what type of top water lure, either. And the swirls they left weren't from half-pint yearlings. No indeed! But at the moment of decision, they left our hooks clean. Getting the Blue Cypress blues is a bassing experience you never forget.

Ours certainly was an unusual introduction to Blue Cypress, one of Florida's little ballyhooed lakes. This beautiful, cypress-ringed body of water, which actually lives up to its name, has been achieving gradual recognition for its superb bass fishing, mainly via word of mouth.

Of course, its lack of general publicity is understandable. Its location is a factor. Located 5 miles east of Yeehaw Junction, it's reached via an additional 4½ miles of rough dirt road off Florida 60 (the Lake Wales-to-Vero Beach highway). Blue Cypress can hardly be classed as rubbing elbows with civilization. In fact civilization is relatively slight. There's one fish camp, one launching ramp at the little Indian River county park, a small trailer park of retirees and weekend escapees from the concrete canyons, and that's it.

Electricity is available, but no telephones. To make reservations for the limited overnight facilities, you have to write, and make certain you allow plenty of time for Uncle Sam's Pony Express mail service to get the message down and a reply back. The mailing address is Middleton's Blue Cypress Fish Camp, P.O. Box 1649, Vero Beach, Fla., 32968.

Obviously Blue Cypress, not exactly a small body of water, doesn't suffer from excessive fishing pressure. It's 3 miles wide and 7 miles long, and the 21 square miles of water offers some of the finest topwater plug fishing available in the state, if you don't get the Blue Cypress blues.

Despite the lack of professional tub thumping promotion, Blue Cypress has been quietly gaining fame in fishing circles, both in and out of state. Rumors of good fishing just naturally spread along the angling grapevine, and those about Blue Cypress are no exception. I'd even heard of it while fishing South Carolina's famous Santee-Cooper, which is a long way from Blue Cypress.

The grapevine reports were so persistently good that Buck Bray, my fishing buddy, who's a professional guide on Lake Rousseau and the Backwaters of the Withlacoochee River at Dunnellon, and I decided to sample the angling. Sample we did, but we were mentally ill-prepared for the encounter, and our fishing morale really took a beating. But like two kids who've sampled the candy jar and got a spanking, we keep going back.

We arrived at Middleton's Blue Cypress Fish Camp—the only one on the lake—towing Buck's 18-foot deluxe Ranger bass boat powered by an 85 Merc outboard and equipped with stick steering, depth finder, and bow mounted electric trolling motor. It's a luxurious fishing machine.

Thanks to Joe Middleton, one of those avid anglers who'd rather fish than eat, and who surprisingly finds time to fish even though running the camp, we quickly got oriented.

Blue Cypress fools you. Located so far down the Florida peninsula and so relatively close to the Atlantic—only 25-odd miles from Vero Beach—you're uncertain what to expect. Actually, the lake is part of the St. Johns River watershed. Blue Cypress waters eventually reach the Atlantic via the St. Johns at Mayport. Blue Cypress depends upon rainfall and drainage from the surrounding lands as far west as the Kissimmee River basin for its water, and the lake level rises and falls according to the season of the year.

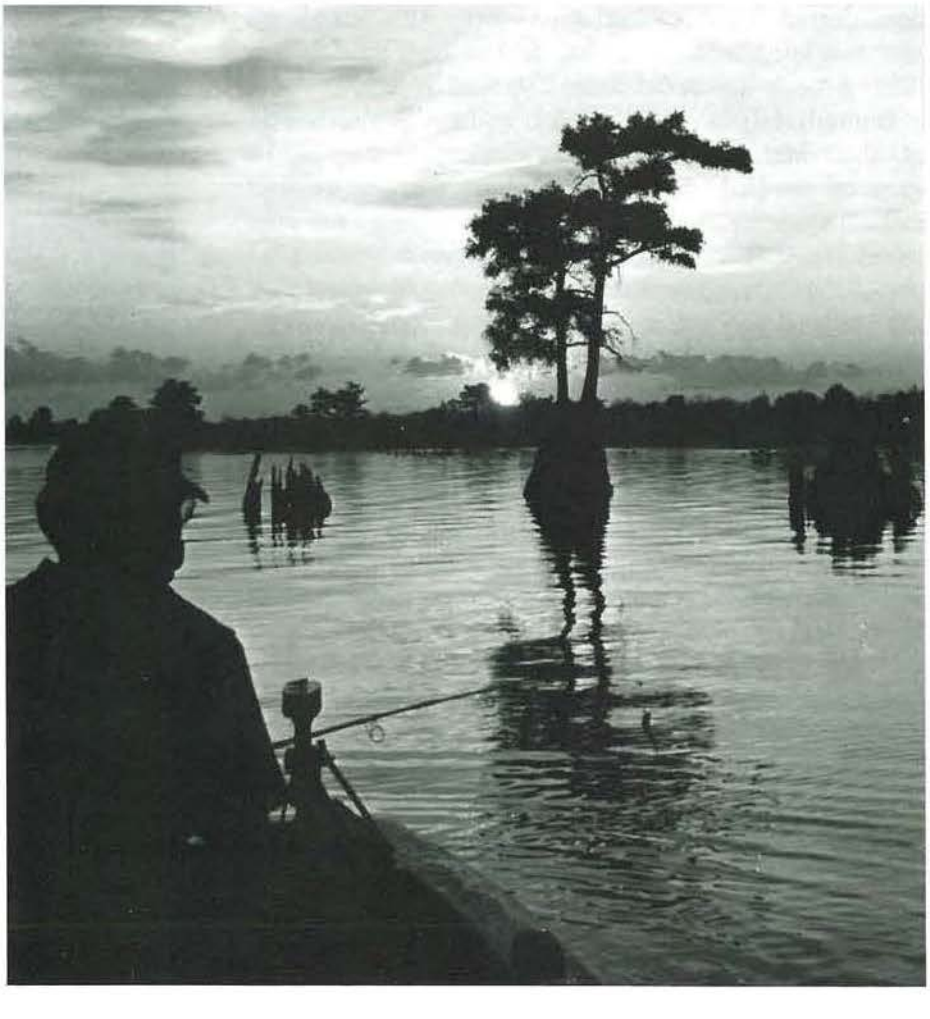
We quickly discovered there are several unusual aspects. This is not a lake dominated by worm fishing. Instead, most of the year it is primarily a top water lake. Oh, they use worms, and I did succeed in getting a pair of small bass with a plastic worm, but the real fun—and in our special case, frustration—comes from top water plugging.

Blue Cypress was designed by nature for those who thrill to the sight of a bronzeback smacking a top water plug. The lake is a shallow saucer, generally 14 feet deep in the center at low water and only 20 feet in places during high. During the low water period—the dry season in Florida—the bass are found in two to four feet of water some distance from the high water shoreline. Your

(Continued on next page)

By MAX HUNN

The clear and virtually weed-free water of Blue Cypress is a plug fisherman's delight. At left, Buck Bray tangles with one of this lake's scrappy largemouth. Located far down the Florida peninsula, about 25 miles or so west of Vero Beach, Blue Cypress drains into the St. Johns. The 21-square mile lake's a typical shallow saucer, with water 14 ft. in depth at center during low water period.



Photos By Kit and Max Hunn

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low water rule of thumb is to fish the outer edge of the cypress where the trees are standing some distance from shore but to forget about fishing inside next to the shoreline. It's then too shallow.

However, it doesn't make any difference because beneath what appears to be open water are old logs and stick ups, which become the low water bass hang outs. You cast to every stick up you see, and more often than not, action results—not always a hooking, however. You also blind cast many times over unseen logs, and you never know what'll erupt from the bottom.

During high water, of course, you plug close to the shore line. The cypress trees and stumps left from logging years ago provide thousands of places for bass to lurk. It's also a good place to get lines broken.

In addition to the lake itself, Blue Cypress has another advantage. On the north shore is the Big M canal, dug in the 1950s to deepen the natural northward drainage, and, of course, to enable citrus growers to irrigate. There's also a lateral canal off the Big M that is an excellent fishing area at times. The main canal is uniformly 10 to 11 feet deep, and at times the fish gather there. The entrance to the Big M is almost directly across from the launching area. The canals not only afford deep water but also protected areas in case of wind.

The afternoon of our arrival, we decided to check out the Big M, since it seemed the easiest to locate considering our unfamiliarity with the lake. We ran the length of the canal to the lock and began fishing back towards Blue Cypress.

Immediately we noticed fish rolling in the center of the ditch. Naturally, we assumed they were gars or mudfish. Mistake number one. Putting on Rebel Quarter-Backs, we began casting. On the second cast, Buck connected.

"Ah," I thought. "Bass action." Little did we realize the con game was starting. Buck had no trouble landing his fish after a short struggle. To our surprise it was no bass but a hefty black crappie (speckled perch) that had struck with the viciousness of a bronzeback. We later learned that Blue Cypress is one of the premier crappie lakes in Florida. It is noted for its big specks. During the spawning season, the crappie are caught with minnows, and the cane polers have a ball—and some mighty nice eating, judging by the size of this one. The specks also are caught by trolling at times, and with tiny jigs when you find a concentration around a brush pile. Of course, in the latter situation the tackle mortality can get high, but when you're catching fish who cares?

A few minutes later, I had a solid hit. We expected another crappie. Wrong again. This time I boated a bass in the 1½-pound class, and he definitely was unhappy at having been suckered into the phony meal.

Buck looked at me with a puzzled expression. I was also in a quandary. Nothing was going according to plans. We were scoring with plugs all right, but we couldn't tell whether we were fishing for crappie or bass. Really, we didn't care because as long as a fish will hit out artificials, we're happy.

Half an hour later, Buck latched into another crappie, and shortly after that I did likewise. Then we noticed the fish no longer were rolling. The feeding period was apparently over. We never did decide what they were feeding upon, but it didn't matter. They'd socked our lures, and we'd had action.

Since it was getting late, we decided to spend the rest of our time learning something about the lake. We did. We found out about the low water, although we didn't run aground, thanks to Buck's depth finder, but we didn't encounter any more fish.

A particularly important factor was the absence of usual grass which so often makes plugging in

Buck Bray boats one of Blue Cypress Lake's small but scrappy largemouths. Although they are usually on the small side, the Indian River county lake has produced some lunkers—up to 18 pounds. Tranquility is one attraction of fishing here. Fact that lake has not been over-publicized has preserved the area's quiet charm.

Photos By Kit and Max Hunn

many Florida lakes an exercise in futility. Seldom did we snag any grass, even pulling the lipped plugs under, and it was a pleasure to find water not fouled with exotic weeds.

Joe agreed to guide us the next morning, and as the sun struggled to break through the overcast, we shoved off for Mudfish Slough, which harbors not only bowfin but lunker bass.

Bass do not get big in Blue Cypress. The biggest weighed in at Middleton's was a lunker of 18 pounds, 1 ounce, caught by a woman on her first bass fishing trip. Unfortunately, Joe never got her name, and she never came back. I guess she thought bass fishing was easy, or figured she couldn't better her performance. Or perhaps her husband may have decided to leave her at home. He could hardly be blamed after such a catch in her first hour and a half of fishing.

Joe holds the second place record, however. He boated a 14-pound, 1-ounce fish on 8-pound test line and an open face reel while fishing with a Devil's Horse plug. The mounted lunker is one of two he has in the tackle shop. The slightly smaller one is plenty big enough to make any dedicated bass man drool.

During the morning fishing, we really got the Blue Cypress blues. Although we managed to land four fish, we had 30-odd rolls and misses, and enough action to make us frantic with frustration. Joe was using a balsa-type lure, working it as a top water, while Buck and I were using single and double propeller plugs. But the lures made no difference. The bass would charge, roll, and not really mouth the lure. They came from all directions, but just wouldn't hit.

By 10 a.m., the action slowed, so we followed the accepted pattern of seeking air-conditioned comfort during midday and a comfortable siesta before sallying forth for the late afternoon session. This time we tried the Big M again, and while I landed two small bass on a 4-inch plastic worm and Buck a bass on a Quarter-Back, fishing was mighty slow. Of course, the bass were still tantalizing us by making their presence known.

The most violent action occurred when I flipped a quarter-ounce spinner bait against the canal bank and was greeted by a heavy roll that could only have come from a lunker in the 7 to 10-pound class. But he was way off range with his strike, and nothing more resulted than my adrenalin going berserk.

However, the climax of frustration came the next morning when Buck and I were fishing the southwest end of the lake, where the water was deeper around the cypress. Fish action was obvious. Herons and egrets were wading the shallows spearing bait fish, and fish were rolling everywhere. The bottom seemed alive.

And again a repeat performance of the ol' con game. We missed strike after strike as the torpedo wakes surged at our lures. But the fish refused to clamp down on the plugs.

The most exasperating incident occurred when I flipped a top water near a cypress stump. The water erupted. We saw the huge bass open his mouth and then miss.

I stared at Buck in amazement as he exclaimed, "Look at that! That was a mighty big fish!"

"Yeah," I responded unhappily, "and he's going to get bigger if he can't close his mouth any better than that on a plug."

In between bouts with myopic bass, we tangled with some roughneck gars. Normally, you have a hard time hooking a garfish, but these were smacking so hard they managed to drive hooks into both their jaws. We wasted a lot of time untangling them.

The wildest session came when Buck tangled with a hefty mudfish that proved it deserved the title "bogus bass." This one clobbered Buck's plug in approved bass style and then put up a wilder fight than most bass. Whew! What a ruckus! Buck finally whipped it and got rid of it, and went back to frustration as the bass continued playing their game. Finally, the action slowed and our morale couldn't take any more beatings, so we called it quits.

Out of some 30-odd good strikes, we'd managed to boat only two bass. Do we know what the Blue Cypress blues are? You can bet your life! But you also can bet your last dollar we're going back. We'll whip those blues, and when things are just right, wow! There should be some line stretching action. The fish are there, and they can't be playing their con game always.

For top water plugging, we're sold on Blue Cypress Lake. ●

the "tiger of the air" is well-equipped for its role as one of nature's most efficient hunters

Great Horned Owl

THERE WERE FOUR OR FIVE pheasant carcasses scattered about the dirt floor of the range pen. Each had been cleanly decapitated. The survivors flailed wildly about the large, mesh-covered enclosure. Even for a high-strung, jittery-natured bird, the ringnecks were noticeably agitated, bounding into the air time after time, ramming their heads and necks through the two-inch mesh wire covering the tops of the pens in a frantic effort to escape. This was their fatal error, I later discovered.

It didn't take long to pick up a clue to the culprit. A single brownish, downy-surfaced feather pointed the finger at a horned owl. Checking over the scene of the crime, it appeared that the owl had clutched the birds by the head as they pressed against the wire. Frustrated in its efforts to pull the victim through the top mesh, it had eaten what it could before dropping the carcass and going on to another bird.

Even in that day when hawks and owls were generally considered varmints and were frequently the object of ill-starred predator control efforts, we seldom bothered either the winged or four-footed hunters that shared our little corner of the hill country. In fact, it was the occurrence of a variety of wildlings that helped make life on the backwoods place so attractive. But this was serious business to us, for once an owl, like most other hunters, finds easy pickings, he is almost sure to return for more of the same.

The following evening was clear, with the moon flooding its soft light over the countryside. From the big timber on the slope behind the house a horned owl hooted. *Whoo-hoo-ho-o-o.* I hunkered down at the base of a huge oak close by the bird pens.

It was a short wait. The owl came on silent wings, drifting over the pens like a menacing dark shadow. In an instant, the tranquility of the evening was shattered by the frightened cackling of a hundred or so rooster pheasants flailing about the pens. For a moment the shadowy form of the owl hovered above the wire, touched down briefly, then flew to the top of a nearby pine.

From the muzzle of the old H&R single, a finger of fire stabbed through the night. The cure took. The beam of the flashlight played over the soft brownish plumage; the strong, hooked bill, and the wicked-looking, sharp-pointed talons of the late departed nemesis of our game farming efforts. Nearby was the fresh head of a pheasant, a trophy of old Bubo's final kill.

Most likely, it was by mere chance that the owl had picked up his unique foraging technique to fit a particular "unnatural" situation. But there is no denying that the horned owl is one of nature's most efficient hunters. He has the size, the temperament, and naturally endowed equipment to fit him for his role as "tiger of the air," as more than one writer has dubbed him.

Although the species has acute hearing, its ear-like "horns" are merely feather tufts rather than the external ears which they resemble. Owls have the usual external auditory equipment typical of birds, that is, an opening on either side of the head, covered by feathers.

The great horned owl—there are several subspecies—inhabits a wide range encompassing timberlands of the continent from the far north to the southernmost area of South America. The bird of the eastern United States shows a decided preference for deep woods.

Long before the other birds give any indication whatever that they are aware of the approaching nesting season, horned owls are busy incubating eggs and caring for their young. Even in the New England states where the chill grip of winter still prevails, horned owls may be on the nest as early as January. After nearly a month of incubation, the young hatch, not infrequently at a time, in the north, especially, when they must be brooded nearly constantly to protect them from the severe weather. The owlets are at first covered with a dense whitish down which soon gives way to darker, buff-colored down. The young birds do not take wing until they are from 10 to 12 weeks old.

Little owls are big eaters. Where there is an abundance of small bird and animal life, which is the mainstay of the horned owl diet, the parent birds are inclined to oversupply the needs of the young. This, coupled with the habit of "casting" or regurgitating wads of hair, feathers, and bones, can make for a pungent aroma in the immediate vicinity of an active nest.

Although the horned owl is a fierce and aggressive hunter, its reaction to intrusion by humans in the vicinity of its nest is varied. The literature is rich with accounts of humans being viciously attacked by nesting owls. On the other hand, some parents offer scarcely more defense of their nests and young than a few half-hearted passes.

The young are indeed voracious, and remain so throughout their lives. Any sort of creature not overwhelmingly large is taken by the horned owl. Where there is an abundance of "game," they usually make a fresh kill for each meal. Where food is not so readily come by, they may return to a kill repeatedly until it is consumed or until they find other game.

Rearing and keeping horned owls as pets has met with varying degrees of success. Often the birds remain sullen and untrustworthy no matter how long they are kept in captivity. There are, however, many instances where the young birds responded well to gentle treatment.

One common misconception regarding the horned owl, as well as other owls in general, is the belief that they cannot see well in strong daylight. Owls' eyes are extremely adaptable, and function efficiently over a great range of lighting conditions. Much of their preferred prey—small mammals such as rats, mice, and rabbits—are most active during the hours of darkness, so this is when much

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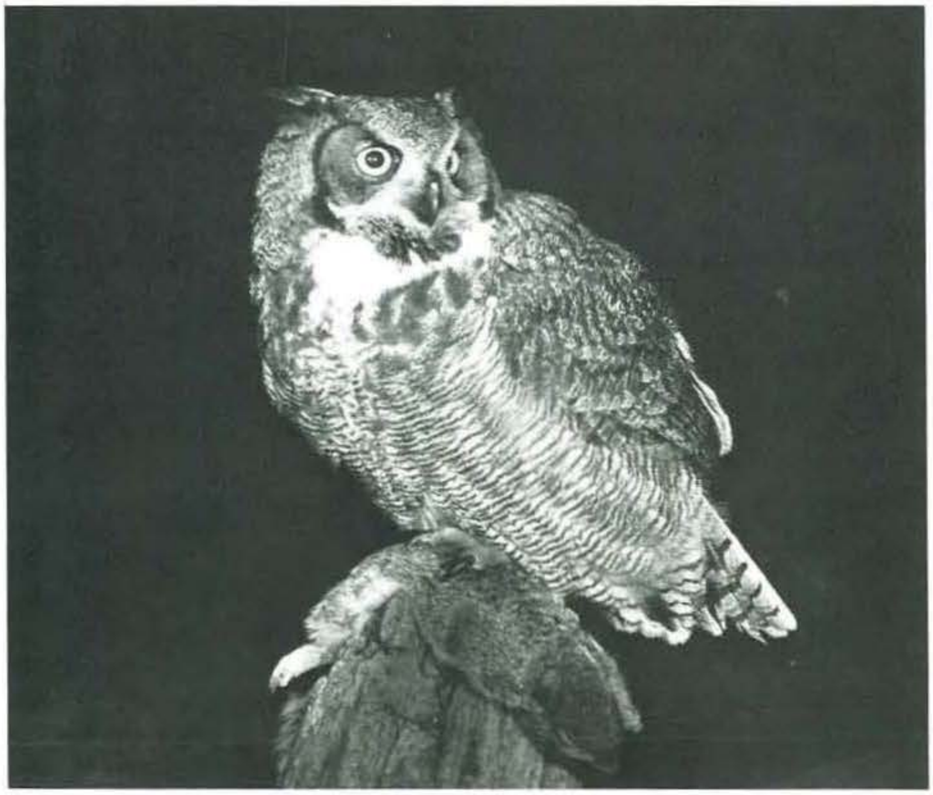
Photos By Leonard Lee Rue III

By MORRIS H. SHAW



Horizontal markings of breast feathers, the white throat patch, and feather "ear" tufts readily separate horned owl from widely distributed barred owl. Contrary to the commonly accepted belief that owls don't see well in daylight, these efficient predators have excellent vision under wide variety of conditions including sunlight. Destructive rodents are among common prey of great horned owl. More than good providers, parent owls have a tendency to oversupply the nestlings.

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foraging effort by owls is concentrated. But owls can see as well in daylight, and can and do hunt then when conditions require it. Various writers have reported horned owls abroad during midday in full sunshine and handicapped not in the least by the strong light.

Arthur Cleveland Bent reported having seen horned owls soaring high in the air on bright days with as much grace and power as an eagle or broad-winged hawk. Not infrequently when afield during the early morning, you may see a horned owl leaving his nighttime hunting grounds in the open pastures and prairie lands, heading for the shelter of the big timber. The strong, powerful strokes of the broad wings, alternated with short periods of gliding, are characteristic of their flight.

Owls have built-in sound dampers that enable them to drop noiselessly on their prey with no telltale rustling or whistling of pinions such as is common with many other birds. Under close examination you will see a "furry" covering on the wing feathers. This is in contrast with a bird like a nighthawk or ringneck duck, the smooth-surfaced pinions of which are notably noisy as these birds plummet from a height.

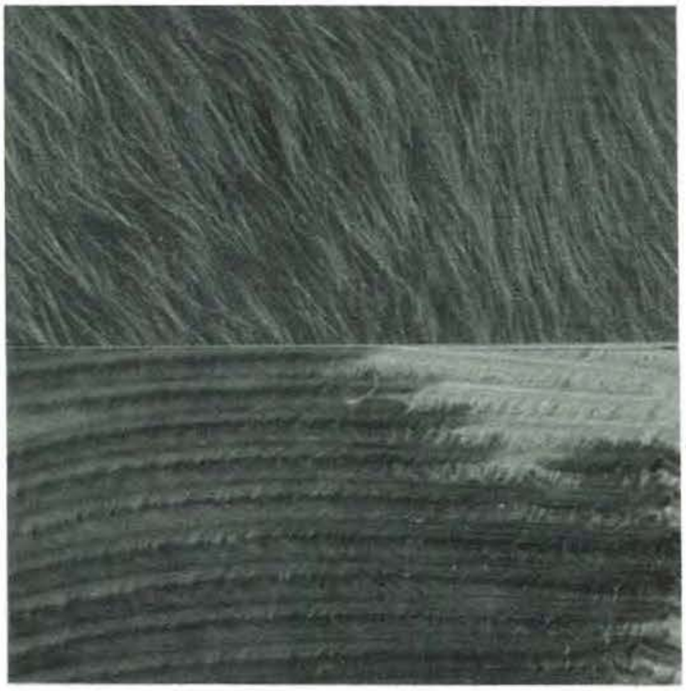
An interesting feature of owls is their ability to turn their heads to either side to a remarkable degree—but certainly not completely around the 360° of a circle, as the old tale holds. Nature is wondrous in her adaptations, but a 100 percent swivel neck is going a bit too far.

Another species, the barred owl, is well distributed throughout the state. It is sometimes confused with the horned owl by the casual outdoorsman. Actually, there is little reason for this, for in appearance they are quite different. One of the most obvious marks is the feathered "ear" tufts on the head of the horned owl which are lacking on the barred owl. In color pattern, the barred is conspicuously marked with dark barrings, that are vertical on the breast and horizontal on the belly. The feathering about its dark eyes gives it a sort of "monkey-faced" appearance somewhat reminiscent of the barn owl.

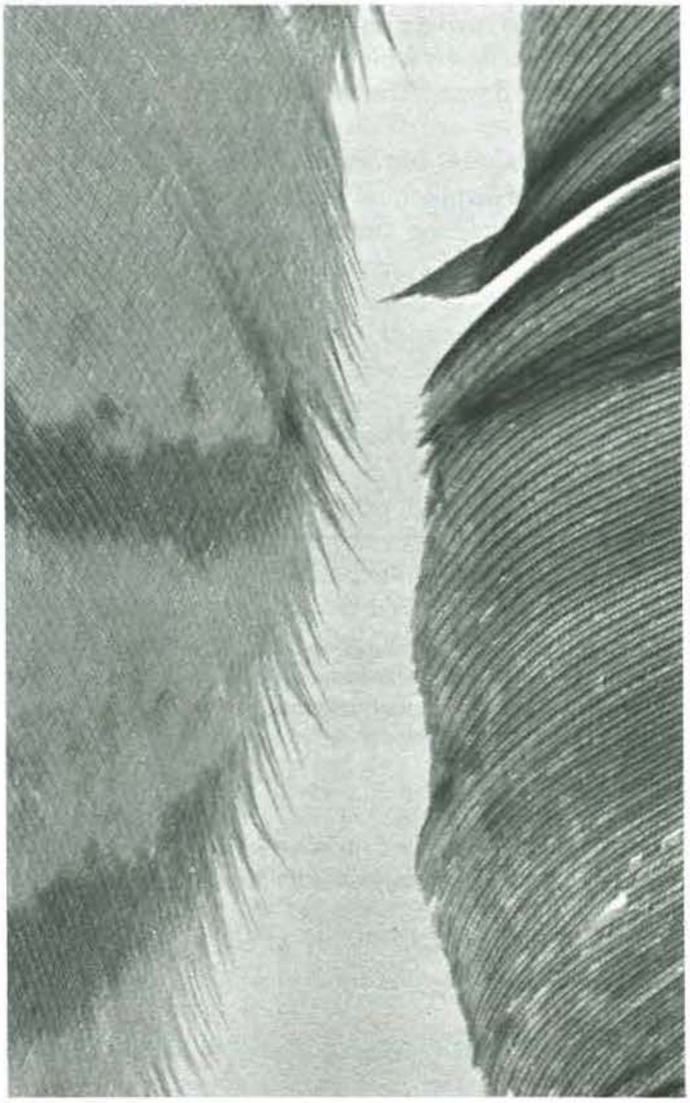
The horizontal barring on both the breast and belly of the horned owl, its darker overall color, its yellow eyes and somewhat less conspicuous facial patch readily separate the horned owl.

The call of the barred owl—hoot owl and swamp owl are other common names applied to the bird in Florida—is the one most hunters are familiar with. "Vehement," "strongly accented," and "spectacular" is how Bent described the barred's call. The horned owl's call, on the other hand, is considerably lower keyed, deeper bass, and softer, but still its voice has great carrying power. Somehow it seems well in keeping with the character of the bird. ●

Silent flight, the key to owls' hunting efficiency, is aided by their remarkable muffled-feather adaptation. In comparison photos, note hairy edge and furlike surface of an owl's feather compared with hard, smooth surface of wild turkey's.



Photos By Wallace Hughes



1975 Hunting Season Information 1976

Northwest Region

(Jefferson County westward, inclusive)

Deer: November 8 through January 18.

Turkey: November 8 through January 18.
Gobblers only may be taken in Leon and Jefferson counties. Other counties—no fall open season.

Quail and Squirrel: November 8 through March 7.

Rabbit: No closed season.

Northeast, Central, South, and Everglades Regions

Deer: November 8 through January 4, except—

DeSoto, Hardee, Manatee and Sarasota counties—November 15 through November 30, and December 6 through January 4.
No open season in the Florida Keys of Monroe County.

Turkey: November 8 through January 4, except—

DeSoto, Hardee, Manatee and Sarasota counties—November 15 through November 30, and December 6 through January 4.
No fall open season in Alachua and Suwannee counties; or in that portion of Columbia County south of SR 240 and west of SR 47.
No fall open season in that portion of the Everglades Region lying south of SR 84 (Alligator Alley).

Quail and Squirrel: November 8 through February 22.

No open season on fox squirrel in Lee, Hendry, Palm Beach, Monroe, Collier, Dade, and Broward counties.

Rabbit: No closed season.

Statewide

Turkey Gobblers: Spring Season

March 6 through March 28 in that portion of the state lying south of State Road 50. March 20 through April 4 in that portion of the state lying north of State Road 50 to the eastern boundary of Jefferson County. March 20 through April 11 in Northwest Region.

Wild Hog: November 8 through January 4.

In Palm Beach and Alachua counties, and in that portion of Levy County lying between the Suwannee and Withlacoochee rivers, generally bounded (north to south) by U.S. 27A, SR 337, lower SR 121, and U.S. 19-98, and including those lands lying north and east of U.S. 27A in R16E and belonging to International Paper Company. In that portion of Collier, Dade and Monroe counties west of Levee 28, south of SR 84 (Alligator Alley), north of the Everglades National Park boundary, and east of SR 29.

Bear:

Bear may be taken in Baker and Columbia counties, and on Tyndall Air Force Base in Bay County, during the established open season for taking deer; and by special permit on designated wildlife management areas. Limit 1 per season.

Shooting Hours—Resident Game

One-half hour before sunrise to one-half hour after sunset; except the Spring Turkey Season, when shooting hours will be one-half hour before sunrise to 1:00 p.m.

Waterfowl—Ducks and Coots

Seasons: November 26 through December 10
and December 17 through January 20.

Shooting Hours: From 12-noon to sunset on opening days; one-half hour before sunrise to sunset thereafter.

The Daily Bag Limit of ducks and mergansers is from one to 10, singly or in the aggregate, depending on the species and sexes taken. The daily limit is reached when the point value of the last bird taken, when added to the sum of the point values of the other birds already taken that day, reaches or exceeds 100 points. Point values are assigned as follows:

100 points—fulvous tree duck; canvasback or redhead*.

70 points—hen mallard, black duck, Florida duck, wood duck, and hooded merganser.

25 points—drake mallard, ring-necked duck, ruddy duck, bufflehead, goldeneye, and widgeon.

10 points—pintail, scaup, blue-winged and green-winged teal, gadwall, shoveler, American and red-breasted mergansers, and all sea ducks.

All other species and sexes of ducks count 25 points each.

The possession limit of ducks and mergansers is two legal daily bag limits, except that the daily and possession limit of canvasback or redhead is 1. Coots have no assigned point value; daily limit 15, possession, 30.

There will be no hunting of brant or geese in 1975-76.

Leon County and Lake Miccosukee in Jefferson County: Waterfowl hunting permitted on Wednesdays, Saturdays, and Sundays and on November 27-28, December 25-26, and January 1. The use of outboard motors is prohibited on Lake Iamonia and portions of Lake Jackson during waterfowl season.

***One canvasback or one redhead** may be taken daily in the following coastal areas only: Seaward of the mainland shoreline from the north boundary of Everglades National Park in Collier County along the Gulf Coast to and including Escambia County, excluding all inland bays and river mouths landward of a line between the most seaward points of the mouth of each, except that hunting will be permitted seaward of U.S. Highway 98 bridges in Escambia Bay, Choctawhatchee Bay, West Bay and St. Andrews Bay at Panama City, East Bay at Apalachicola, and Ochlockonee Bay; in Tampa Bay seaward of U.S. 19; and in Charlotte Harbor seaward of U.S. 41.

Special scaup-only season: January 21 through January 31. Daily bag limit 5, possession limit 10. No shooting within 200 yards of any main shoreline. Delineated scaup-only hunting areas will be: All open waters of Charlotte Harbor from the Fla. Power & Light power line 4 miles east of U.S. 41 bridge on the Peace River and from the El Jobean bridge (S.R. 766) on the Myakka River to a line running from Boca Grande Pass east through Bokeelia to the mainland. All open waters of Tampa Bay. All open waters of Sarasota Bay south to the Albee Road bridge. All open waters of Estero Bay. All open waters of Lemon Bay. All open waters of the Indian River from the Melbourne bridge (S.R. 516) south. All open waters of Biscayne Bay south of Biscayne National Monument to and including Barnes Sound.

All waterfowl hunters 16 years old and over must have a Federal Migratory Waterfowl Hunting Stamp, available from U.S. post office for $5.00. It is nontransferable; must bear hunter's signature across its face.

DESPITE ITS SOMEWHAT LIMITED range here, the snook, *Centropomus undecimalis,* is one of Florida's most avidly sought game fishes. A ready taker of a variety of artificial lures as well as natural baits, the snook is a strong fighter and a popular table fish.

A couple of years ago, biologists of the Game and Fresh Water Fish Commission conducted a limited experimental test of the species in fresh water ponds in southern Florida. The survival and growth rate of both fingerlings and subadults was excellent.

The promise of the snook lies not only in its possibilities as an addition to the list of species readily available in suitable fresh waters but also in its potential as a control agent on the overpopulations of spiny-rayed fishes, especially bluegills, that plague many bodies of fresh water here in Florida. This would be as a supplement to, not as a replacement for, the largemouth bass and other naturally present predatory species.

Basically a fish of Florida's mangrove coastal areas, the snook nevertheless is fitted by nature to adapt to a completely fresh water environment. Snook may be encountered with some regularity in stream systems a hundred miles or more from the nearest salt water. They are also found in some numbers in remote inland lakes subject to storm tide influence.

Distribution of the snook in the United States extends as far north as North Carolina on the Atlantic and around the entire Gulf Coast. Sizable snook populations occur in south Florida, Central America, and northern South America. Small populations are also found in the West Indies.

Major populations of the species in Florida occur along the Gulf as far north as Tampa Bay, although the fish has been taken at least as far up the coast as Cedar Key. Occasional fish are caught by rod and reelers in the Homosassa-Crystal River area. On the east coast, the Fort Pierce and Sebastian areas represent the northernmost boundaries for

Handmade Snook—Almost

By MORRIE NAGGIAR
with
PHIL CHAPMAN

there are still some kinks in the Commission's effort to propagate snook artificially but the results so far show much promise

Project Leader Lothian Ager, far left, gives assist to biologist Phil Chapman who has battled snook to standstill. Rod and reel fishing has been most effective in obtaining brood fish for the propagation effort. Ager, above, gives fish hormone shot to induce spawning. At left, a plankton net is washed down, concentrating the catch of small food organisms in part of snook project.

Photos By William Greer

snook fisheries. Minor populations may be encountered into Volusia County.

Based on tagging studies, snook appear to be relatively nonmigratory. Their movements are apparently confined to short jaunts between inshore and offshore areas, and to coastwise travel which is not as extensive as has commonly been held to be the case.

Little is known about the early life history of the snook. Apparent natural spawning has been observed near the mouths of rivers, in and around passes, and in bays. Spawning activity begins in May and may last into November, reaching its peak in June. Tidal streams, salt marshes, and estuaries provide nursery and rearing areas for juvenile stages of this species.

That mangrove swamps serve as the preferred habitat of the snook is attested by the fact that the species is found in greatest numbers where associated with these areas. Abundant food and extensive protective cover among the prop root tangles of the red mangrove provide juvenile as well as the adult fish with optimum security.

In Florida, catches of 20-pound snook are common, and 35-pounders are landed occasionally. No records are available to document the maximum size attained in fresh water, but 20-pound snook have been reported from areas of Florida streams far removed from salt water. The largest hook-and-line-caught snook recognized by the International Game Fish Association was taken in Mexico in 1963. It weighed 52 pounds, 6 ounces. Previously the record was a 50½-pounder taken in Panama. Closer to home, a snook weighing 49½ pounds was reportedly landed by a sport fisherman at Marco, Florida, prior to 1961.

Range extension of snook in the United States is evidently limited by cool water temperatures. The lowest water temperature the species can readily handle appears to be about 60° F. Snook become sluggish during cold periods, and many instances of winter kills of this fish are documented from the lower Florida west coast to Texas. Residents of the Naples area indicate that snook are temporarily stunned by sudden drops in temperature. Affected fish become lethargic, or in some instances, immobilized at the water's surface.

Small fishes, shrimp, and zooplankton—the tiny

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animal life that is frequently found in great abundance in both salt and fresh water—have been found to comprise the major food items eaten by young snook. Adult fish feed by preference on other fishes, shrimp, and crabs. When those preferred food items are scarce, snook will take whatever forage organisms are available.

A major block in conducting extensive experimental stockings in freshwater areas has been the lack of a sufficient number of snook to make such an undertaking feasible. Artificial spawning and rearing of young from natural stocks appeared to be the logical answer. The efforts of the Commission's fisheries workers in this direction have received the blessings and cooperation of Bureau Chief Ed Joyce and his Marine Science and Technology section of the Department of Natural Resources.

Lothian Ager, Game & Fresh Water Fish Commission biologist in charge of the snook project, says, "Our effort in the artificial propagation of snook has been a matter of starting from scratch, like our striped bass project a few years back, only more so. At least we had the experience and assistance from some other states to guide us in the case of the striper. With the snook, there is little known of its natural history and nothing at all regarding artificial propagation."

It was known that snook congregate, and probably spawn, in the natural passes between the bays and ocean or gulf. Major concentrations of snook are found in tidal areas during the period of the new and full moon phases when tidal flow is strongest.

It was found that the eggs of the snook must remain off the bottom during incubation. In this respect, and in others, artificial propagation requirements of the snook are similar to the striped bass; in fact, many of the Commission's striper propagation techniques, and some of the specialized equipment, are used in the snook work.

During the 1974 season, a stock of brood fish was captured at Lemon Bay, near Englewood, in Sarasota County. Guided by the techniques developed during the striped bass program, prospective brood fish were injected with a hormone preparation. Approximately 38 hours later, development had proceeded sufficiently to allow the eggs to be readily stripped. The high reproductive potential of the snook was shown by one 13-pound female which yielded in excess of a million eggs!

The first successful attempt at snook spawning was accomplished during early June 1974. The result was an estimated million and a half fertilized eggs. An electrical failure in the portable hatchery equipment doomed most of these eggs, although a small percentage hatched despite the adverse conditions. A scattering of fry even made it through the critical first few days of life and began feeding before some undetermined factor did them in. But at least the limited success indicated that artificial propagation of the species is feasible.

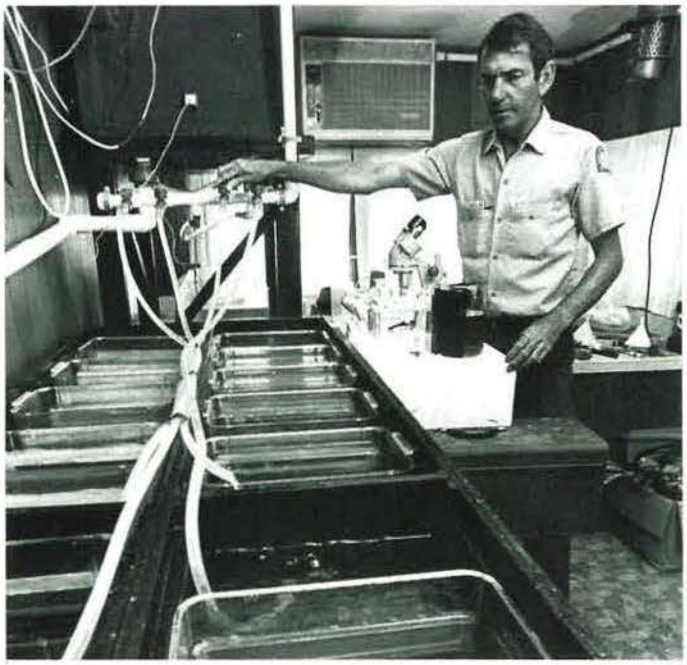

Photo By William Greer

Biologist Vernon Ogilvie adjusts water flow in mobile laboratory's hatching trays. The snook propagation effort is a matter of working out proper technique a step at a time. There's no experience to profit from, so it's new ground all the way.

The initial effort during the 1975 season was concentrated in the Marco area on the lower Gulf coast. Through the cooperation of the Collier County Conservancy, a privately-endowed conservation group, living and working facilities at the Rookery Bay Marine Laboratory were made available to the Commission crew.

Difficulties still continue to plague the program. There are some hopeful signs, however. Artificially spawned fish from the Marco area have made it to the 10-day stage before succumbing. Efforts are continuing, concentrated at press time in the Boca Raton area at the Commission's exotic fish investigations facility there. The crew has for the first time brought off broods of snook from wild stock adults captured in the vicinity. Keeping the fry alive is going to be a process of eliminating, one by one, the factors that have a possible bearing on the matter.

Looking back on the early throes of the striper project, it once appeared rather a folorn hope that any quantity of fingerlings could be produced from native Florida striped bass brood stock. All that has changed, as has been reported in previous issues of *Florida Wildlife* and elsewhere.

Hatching and rearing snook is not an easy task, since there are numerous unknowns to be worked out. But the potential result—a real breakthrough in snook propagation—keeps the fisheries men plugging away, hopeful that at any turn they may see the light at the end of the tunnel. ●

Back-Up

having a spare rifle scope in your kit on a hunting trip is mighty good insurance that unexpected sight problems won't foul up the works

By EDMUND McLAURIN

Although most quality scope sights currently mounted on hunting rifles usually prove remarkably durable and dependable in field use, they are, nevertheless, still optical instruments vulnerable to unanticipated mishaps. Accidental dropping, as can easily occur when climbing a tree, when traversing rocky country, or when wilderness hunting by packhorse, may result in damage—lens breakage, bent eyepiece, or dented scope tube—that renders the scope useless.

If the hunter happens to be using a rifle with auxiliary metallic sight combination, he can remove the damaged scope from its bases and resort to substitute use of the metallic sights.

However, many late model hunting rifles carried into wilderness areas now feature only scope sight installation, and any serious damage to it makes the hunting rifle practically useless. Rarely can scope repair be accomplished in the field.

The best bet against having a hunting trip ruined by unexpected scope sight damage is to simply carry along an extra scope that can be quickly substituted for the damaged one, without serious loss of hunting time. Weightwise, this is more practical than taking an extra rifle into remote hunting country.

Such companion scope sight should be of comparable quality, model, and aiming reticule as the one receiving conventional service.

It should be mounted in holding rings identical to those on the No. 1 scope, so that the dove-tailed ring mounts can be slipped on the same bases that originally accommodated the damaged scope. Also, the extra scope should be pre-positioned in its holding rings for correct eye relief, with all ring mount screws tight, and the rear eyepiece properly focused for the shooter's eyesight.

Sighting-in should be accomplished in advance on home range, with the same brand ammunition and bullet weight of intended hunting use, so that the substitute scope has the same established windage and elevation zero as the scope sight normally kept mounted on the hunting rifle.

Once everything is optically and mechanically correct, the spare scope is removed from the rifle and protectively wrapped and stored in a hard fiber, waterproof tube (such as a screw-cap, small artillery shell container) until needed.

Matched to proper style container, the packaged spare will be compact as well as protected.

Considering the total cost of most hunting trips—especially infrequent ones to faraway places—investment in an extra scope sight is good insurance against discouraging hunt interruption or totally disappointing experience.

It is ironic that some really worthy products never realize their full potential. I can cite three specific cases where products of trade worthiness and applicable usefulness have either missed out by chance or fallen by the wayside through consumer apathy.

Those whose shooting activity embraces the firing of restored originals or replicas of yesteryear muzzleloading revolvers and black powder rifles often favor use of round ball projectiles. These they home-cast, using carefully controlled molten lead alloy mixture poured into molds. Production is relatively slow.

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Although a scope sight usually proves dependable, its optical nature renders it vulnerable to field mishap. It pays to carry a pre-sighted-in, ready-to-slip-on spare, as in photo, on an important or far-away hunt.

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Even the best-made molds form ball projectiles with the physical imperfection of a bit of lead waste attached, where the molten metal is poured into the mold. For accuracy on firing, this lead waste, known as sprue, must be carefully removed with a razor blade or sharp knife after cooling, so that each formed ball has a truly round shape. This hand operation alone cuts down considerably on volume production.

Another conventional mold flaw is a flat spot on the formed ball.

A friend who likes to shoot a muzzleloading rifle in competition and participate in Florida's annual primitive weapon hunts, has developed a homemade, volume-production lead ball making tool that turns out some 195 perfectly formed projectiles an hour—each clean of attached waste and the common flat spot of usual ball molds. As a result, he spends less time making his rifle loads and more time shooting. Every contemporary blackpowder rifleman who has seen his improvised volume production tool wants one!

Ironically, however, my friend so far has not had commercial adoption and production of his invention, primarily because distantly located firms that might manufacture it have not seen the tool in operation. Add the influencing fact that my friend is more interested in producing perfectly formed lead balls for his own black powder rifle shooting and hunting, than in capitalizing by making up a duplicate and submitting it for testing and evaluation by a manufacturer specializing in ammunition-making tools.

Meanwhile, countless thousands of blackpowder riflemen who use round ball projectiles in their long guns would be very happy to have a tool producing perfectly-formed lead balls, without sprue or flat spot, at the rate of 195 per work hour.

The second example concerns the belated consumer recognition of a most efficient electric hibachi, known as Meteor Model M-185, formerly produced by Meteor Electric Division of Nu-Rod, Monrovia, California 91106.

In its production line days, the compact, well-made, and obviously durable hibachi was experimentally purchased in small lots by hardware and sporting goods dealers, but usually only one or two units ended up among displays of more complicated, larger, more costly competitive products.

Despite its heavy-duty, round-style rod heating element, a housing both rustless and easily disassembled for cleaning, and the unique feature of cooking meats to perfection without burning, the little hibachi was slow to be recognized as superior to more expensive ones. Those who purchased the Meteor units liked them, but the word-of-mouth story of the efficiency of the low-priced (only about $15) hibachis did not get around fast enough to create the demand necessary to justify continued production. They had to be seen in use to be fully appreciated. Also, first distribution evidently was not sufficiently blanketing among retail trade outlets.

For instance, I did not know of the existence of the model until I was witness to its use in the hunting camp maintained by my cousin, Dr. Wilbur McL. Davis, and his fellow hunting club members. I immediately wanted one, but the Orlando retailer, who originally had only a dozen and for a long time found them slow-moving, was by then sold out. He had to forgo capitalizing on numerous sudden interest sales because of inability to obtain the product from the initial wholesale supplier or direct from the factory.

If you run across a Meteor Model M-185 electric hibachi, as formerly made by Meteor Electric Division of Nu-Rod, you're in luck, if you can use a good electric hibachi in home or in hunting camp. If you don't want the impressively performing cooking unit yourself, let me know available retail source. There are others besides myself who want one. We are all looking and hoping.

A third example of a not-fully-appreciated product is the discontinued Winchester Model 100 autoloading big game rifle.

From the first, the Winchester Model 100 had physical charm. Possessing gracefully flowing design and neat assembly of the action to a single-piece wood stock, it also balanced nicely in the hands.

In addition, it had sales appeal of being chambered for .308 Winchester caliber, same as the 7.62mm NATO cartridge. Prospective buyers calculated they could save considerable ammunition money, and have a lot of pre-hunting season practice fun, by using relatively available interchangeable 7.62mm NATO military surplus ammunition.

It didn't work out that way. As with most Winchester autoloaders, the Model 100 big game rifle was engineered to perform reliably with Winchester-Western manufactured ammunition. Some rival brands, as well as various lots of .308 Winchester caliber equivalent NATO military ammunition, simply did not feed and eject satisfactorily. The secret of trouble-free performance, of course, was to match individual Model 100's with brand ammunition of their liking and mechanical acceptance.

In due course, Winchester discontinued the Model 100 but almost immediately put on the drawing board a facsimile, the Winchester Model 490, chambered for the .22 long rifle rim fire cartridge. First productions are just reaching retailers.

It is easier to make a .22 autoloader that will accept a variety of ammunition brands than to produce a center fire autoloading big game rifle with similar virtue. The main reason is that the .22 long rifle rim fire cartridge does not develop anywhere near the high, brass case-expanding, chamber-sealing pressure of a center fire rifle caliber like the .308 Winchester. High chamber pressure, case expansion, and the surface friction of a fired case during mechanical extraction can, together, cause jams in a center fire autoloader, especially if the rifle's chamber walls happen to be slightly rough.

Even so, the discontinuance of the Winchester Model 100 autoloading big game rifle has been a disappointment to many hunters. If it were brought back, many shooters owning a Model 490 .22 would buy the big game Model 100 version, or, having no rifles at all, would acquire the two models as a matched set, so that practice with one would supplement skill with the other.

Fortunately, many hunters already own a Winchester Model 100, acquired when the model was in production. They need only to acquire a Model 490 in .22 caliber, to realize full potential of the teamed two.

And maybe, just maybe, Winchester will once again market the Model 100, chambered for the excellent .308 Winchester cartridge.

BACK IN COLONIAL FRONTIER days, and in the days of exploration and settlement of the west, virtually every able-bodied male owned a rifle or pistol. Of necessity, the weapon was either a black powder flintlock or one of early percussion type. Modern rifles and handguns as we know them were still decades away.

Today, with wide variety of modern center fire rifles and handguns to choose from for hunting and target shooting activity, there is still considerable preference for the primitive forms. Among hunters and target shooters alike there has been a mushrooming revival of interest in shooting restored originals or replicas of old time flintlock and early percussion type black powder guns. Those who use them for hunting or for target shooting say there is marksmanship challenge not to be matched in a modern firearm.

All over the country, muzzleloading rifle and pistol clubs are getting into action, and state game commissions, including Florida, now recognize widespread interest by annually scheduling special big game hunts limited to the use of primitive types of weapons. (Write one of the regional offices listed on page 1 for hunt dates and regulations.)

Attempted restoration of an existing original flintlock or early percussion-type hunting rifle can be costly—and frequently dangerous. To begin with, replacement parts are not to be had and, where needed, must be duplicated by carefully executed, time-consuming handwork. Many trial fittings of handmade parts usually must be done. Also, originals (outside of judiciously maintained museum pieces) that have managed to survive to 1975 quite likely have suffered rust damage that is not always outwardly evident. Critical component parts may now be dangerously weakened, as combined result of age and rust.

Only qualified gunsmiths or home craftsmen skilled in the use of drill press, machine lathe, and certain special tools, usually attempt restoration of originals.

Easier, and considerably safer, is purchase of a replica.

Currently, there are approximately 50 different models of black powder long guns being manufactured in exact replica or close resemblance to long-ago originals, and at least 35 pistol models.

Although look-alikes, these copies are made from modern metals, and are much stronger and safer to shoot than originals. Some well-known national brands are to be found among makers. The relatively familiar names of Lyman, Dixie, Century, Richland, Thompson, Interarms, Harrington & Richardson, Hi-Standard, and Ruger appear among the manufacturers advertising ready-to-use replicas in gun magazines.

Unfortunately, many of the replicas carry rather high prices, considering these tight money times. Many who long to own a good flintlock or early percussion-type rifle, and yearn to get in club-connected target shooting fun and special primitive weapon hunts, have had to forgo the pleasure of acquisition and use.

Primary reason for the substantial retail prices placed on ready-to-use replicas is the factory labor cost of assembly and testing. This *must* be figured in the setting of the retail price of a product, and is no small factor. Manufacturers now realize that many would-be purchasers simply cannot afford to purchase completely assembled and tested ready-mades.

Many are now offering do-it-yourself kits that include completely shaped component parts made to close tolerance for easy assembly and subsequent wood stock finishing. Both long gun and pistol kits are offered.

Gander Mountain, Inc. (Wilmot, Wisconsin 53192), a national mail order sporting goods supplier, for example, catalogs a Kentucky rifle model replica working kit for less than half the price of a completely assembled model.

Similarly, Richland Arms (Blissfield, Michigan 49228) produces a do-it-yourself assembly kit of all parts needed to create a replica of the famous .44 caliber Remington Army pistol, considered to be one of the most accurate and dependable black powder revolvers of the War Between the States period. Richland also has kits for assembly of earlier flintlock and percussion type pistols.

Under provisions of the Federal Firearms Control Act of 1968, black powder rifles and pistols, as well as do-it-yourself assembly kits, may be shipped direct to purchaser, instead of to a local Federally licensed dealer, as required of interstate shipments of modern sporting firearms. ●

CONSERVATION SCENE

Mosquitoes Useful

IF ANY PROOF IS NEEDED that every living creature plays a useful role in nature, a Utah scientist is about to supply it, according to the National Wildlife Federation.

Dr. Lewis Nielsen of the University of Utah is collecting evidence to prove that if it were not for the lowly mosquito, much despised by man, some of our most beautiful wildflowers would vanish. Male mosquitoes, like bees, feed on the nectar of flowers. "What we're trying to show," Nielsen says, "is that as the mosquitoes fly from flower to flower they also pollinate the blossoms and enable the flowers to reproduce."

Nielsen, an entomologist, concedes that mosquitoes are not as important as bees but believes they pollinate some tiny flowers that bees ignore, such as forget-me-nots. The pesky insects also play another role in nature, according to the NWF: They are a source of food to such predators as fish, birds, bats, dragonflies, and spiders.

Giant Catfish

AN UNOFFICIAL STATE RECORD for the flathead catfish was chalked up to Tom Norman, 19, of Thonotosassa (right).

Fishing from the bank on the Hillsborough River, Norman latched on to the 57½-pound catfish while bass fishing with a live shiner on spinning tackle.

Certified by Commission Fisheries Biologist Dave Reece, the big cat measured in at 48 inches in length and a 29-inch girth.

The flathead, non-native to Florida fresh waters, was caught on 30-pound test line with a 5½ foot rod.

Not realizing the record potential, Norman caught the cat on the morning of Tuesday, August 12, but did not officially weigh it until Thursday.

Reece said the big flathead could have weighed more, but, due to loss of body fluids during the two-day wait, the giant fish probably lost several pounds.

Stalls Retires

AT ITS JUNE MEETING in Tallahassee, the Commission recognized retiring Wildlife Officer Howard Stalls of Jacksonville for his 33 years and 7 months service with the agency.

Commenting on the occasion, Commissioner Randolph Thomas stated that he has known Stalls

for many years as a goodwill ambassador for the Game and Fresh Water Fish Commission.

"In addition to his outstanding performance on the job, his willingness to lend a hand to a variety of community projects is an outstanding attribute of this public-spirited gentleman," said Thomas.

The Director, Dr. O. E. Frye, Jr., and a number of Commission staff members also praised Stalls and thanked him for his faithful service.

The brief ceremony was concluded with the presentation to Howard, by Commissioner Thomas on behalf of the Commission, of the traditional gold wildlife officer's badge and a framed certificate of appreciation.

Barge Canal Studied

BIOLOGISTS FROM THE Game and Fresh Water Fish Commission are working side by side with other state and federal agencies and private firms in preparing data and analyses which will be incorporated into an environmental impact statement on the Cross Florida Barge Canal.

An environmental and economic impact study was requested by the Florida Governor and Cabinet. A federal court ruled that a complete study of all the effects of the proposed canal was required before a decision could be made on the canal project. Congress has appropriated funds to the Corps of Engineers for the project.

Game and Fresh Water Fish Commission representatives are working on the fisheries and wildlife portions of the study, with the results to be turned over to the Corps in February 1976.

A team of fisheries biologists, headed by Gray Bass, is studying fish populations and harvests along the canal and the Oklawaha River. They are sampling fish populations from the Gulf of Mexico to Palatka, running creel census and interviewing fishermen along the route to determine catch rates and harvest of various species.

Other teams of biologists, headed by Dr. Nicholas Holler, are surveying the animal, bird, reptile, snake, insect, and plant populations in areas along the alternative canal routes. They are studying the effects of canals along various alignments on the wildlife habitat and on wildlife. Of special concern are the effects of the canal on presently or potentially endangered or threatened species and the habitat required to support these species.

The environmental impact statement, along with recommendations, will be prepared for review by various governmental agencies before ultimately being submitted to Congress along with the Corps' request for funds to carry out whatever course of action the Corps recommends.

Hunting Lands

A PILOT PROGRAM TO ENCOURAGE large private landowners to open up their lands to public hunting is now in its second year, and officials of the Game and Fresh Water Fish Commission are enthusiastic about its future.

The program was begun in 1974 with the establishment of a new category of wildlife management areas called Type II. These lands, owned mainly by large paper and forest companies, are in addition to the more than 40 wildlife management areas already in operation by the Commission.

The lands would be open for public hunting, with the landowner issuing access permits and doing necessary habitat improvement and boundary posting. The Commission, in turn, would enforce mutually acceptable regulations and offer technical assistance from its Wildlife Management Division personnel.

"The initial response to the program has been very good," Fred Stanberry, chief of wildlife management, said. "There are currently about 320,000 acres in Northwest and Northeast Florida in this type of wildlife management area. We hope to eventually open more than one million acres of suitable land to public hunting and fishing."

Leases have been signed with Owens-Illinois, Inc., International Paper Company, and the Gilman Paper Company. Several other companies are interested in adding their lands to the program this year, Stanberry said. The Type II lands are in Union, Levy, Madison, Gulf, Franklin, Liberty, Walton, Washington, Jackson, Holmes, Taylor, Jefferson, Baker, Clay, and Duval counties.

Permit Opposed

THE GAME AND FISH COMMISSION has strongly recommended against permitting, by the Army Corps of Engineers, of the latest proposed Marco Island land development. This massive project would involve the filling in of almost 3,000 acres of highly productive mangroves and vegetated bay bottom.

St. George Island

SECRETARY OF THE INTERIOR Stanley K. Hathaway has announced approval by the Bureau of Outdoor Recreation of a $562,500 Land and Water Conservation Fund grant to Florida to help acquire 342 acres of Gulf beachfront land for future development as a state park. The acquisition will provide additional outdoor recreation opportunities for the 500,000 residents of northwest Florida, plus many visitors to the Panhandle area.

James G. Watt, director of the Bureau of Outdoor Recreation, which administers the Land and Water Conservation Fund program, cited the project as "an excellent example of Federal and State government coordination that will result in increased public recreation opportunities and preservation of our nation's valuable shoreline."

(*Continued on next page*)

(Continued from preceding page)

The acquisition will provide 4,902 feet of Gulf frontage on St. George Island, an offshore barrier island. The beach area and bay shore will be used for swimming, sunbathing, and fishing; future developments will include facilities for picnicking, camping, boating, and nature study. The acquisition is the third in a series of five purchases, and is the first to receive Land and Water Conservation Fund assistance.

The Federal grant will be matched by the State of Florida for a total recreation investment of $1,125,000. At the state level, the L&WCF program is administered by the Florida Department of Natural Resources.

New Boating Law

FLORIDA BOATERS NOW HAVE 10 days after purchasing a boat before it has to be registered.

According to the law passed by the 1975 Legislature, a boating enthusiast now has a grace period in which to try out the boat. He must, however, have proof of purchase on board at all times.

Dr. O. E. Frye, Commission director, said that prior to July 1, 1975, a boat had to be registered before it could be put into the water. The new ruling puts a boat owner in the same category with an automobile owner.

"Before, if a family bought a new boat on Friday or Saturday, they had to wait until Monday to register the boat and maybe wait until the next weekend to try it out. Yet, the same family could buy a car and drive it cross-country that night," Frye explained.

The newly amended law reads that every motorboat using the waters of this state shall be registered and numbered within 10 days after purchase by the owner.

Registration is made through the office of the county tax collector, with re-registration on an annual basis. Registrations expire the 30th of June each year. Owners registering their craft should have proof of ownership, such as a bill of sale, builder's contract, or, in the case of a custom-built boat, a verification of ownership.

Frye also pointed out that Florida does recognize and honor boats registered in other states visiting Florida waters for a maximum of 90 days. A boater intending to use his boat in Florida longer than that must register the craft in Florida. He may retain his out-of-state registration number if he plans to return to his home state after an indefinite period of time.

Left to right: Robert C. Johnson III, Everglades Region; John L. Ward, South Florida Region; James Marshall Futch, Northwest Florida Region; Michael L. Thomas, Central Florida Region; and Lee M. Crews, Northeast Florida Region.

Officers Recognized

THE GAME AND FRESH WATER Fish Commission recognized five outstanding wildlife officers at the meeting of the Commission held at Atlantic Beach in July. They were: Northwest Florida Region: Wildlife Officer James Marshall Futch, assigned to Wakulla County with residence in Crawfordville. Futch is a veteran enforcement officer with service since 1958.

Northeast Florida Region: Wildlife Officer Lee M. Crews, assigned to Alachua County with residence in Gainesville. Crews has 10 years service and is noted for outstanding public relations as well as effective enforcement of wildlife laws.

Central Florida Region: Wildlife Officer Michael L. Thomas, assigned to Volusia County with residence in New Smyrna Beach. Thomas has been with the Commission as a wildlife officer since 1972. He also had three years service with the Commission's wildlife reserve program prior to employment by the Commission.

South Florida Region: Wildlife Officer John L. Ward, assigned to DeSota County with residence in Arcadia. Ward has been with the Commission since 1971 and is on the eligibility list for promotion to Wildlife Sergeant.

Everglades Region: Wildlife Officer Robert C. Johnson III, assigned to Collier County with residence in Ochopee. Johnson has been a wildlife officer since 1971, and is noted as a skilled operator of wilderness patrol vehicles such as swamp buggies and half-tracks. His major duty assignment is in the Big Cypress Swamp area.

Wildlife Officer Michael Thomas was selected to represent the Commission's Law Enforcement Division at the annual meeting of the Southeastern Association of Game and Fish Commissioners in St. Louis, Missouri, this month.

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SHELLCRACKER	2 pounds or larger
BLACK CRAPPIE	2 pounds or larger
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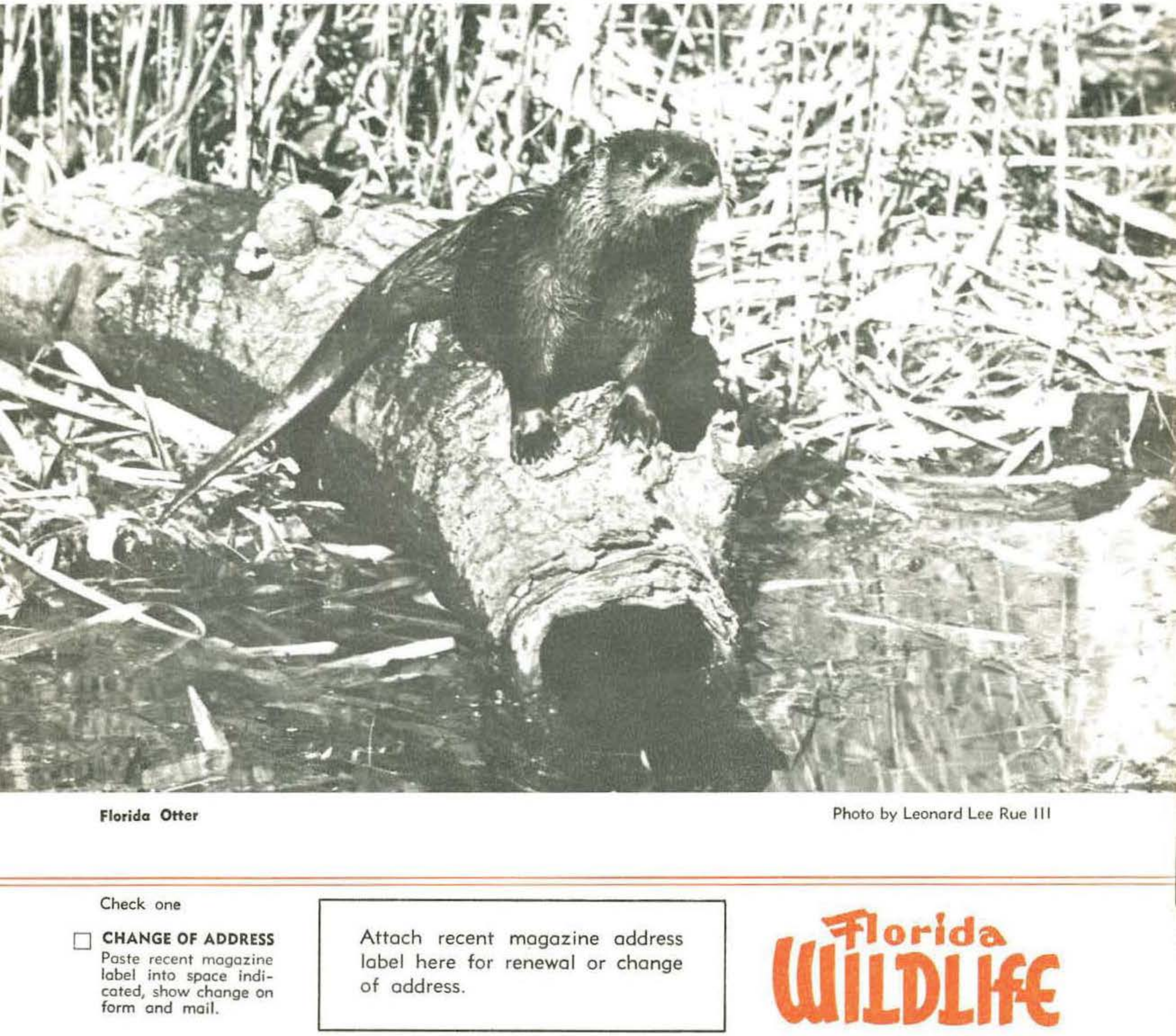

Florida Otter

Photo by Leonard Lee Rue III

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